FEEDSTUFFS

The Weekly Newspaper for the Feed Industry

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Feed and Turkey Groups State Positions on Orders

By FRED E. TUNKS
Feedstuffs News Editor

CHICAGO — Testimony declared here Dec. 8-9 probably represented the opinions of more people in the turkey and feed industries than that heard at any of the four hearings which preceded it. Not because of the numbers of witnesses heard, but because a number of those who testified represented national organiaztions, including the National Turkey Federation, the Grain & Feed Dealers National Assn. and the American Farm Bureau Federation.

The Chicago hearing, staged in the LaSalle Hotel, was of particular interest to the feed industry because a relatively large number of witnesses appearing operate feed manufacturing plants or represent feed manufacturing companies.

It was here, too, that support for a feed man's suggested amendment to the proposed turkey marketing order gained endorsement. References to grower allotments or allocations were so frequent that the "Ziegenhagen Amendment" became common terminology. Elmer Ziegenhagen, turkey feed sales manager of the Supersweet Feeds division of International Milling Co., Minneapolis, was remembered for proposing at the second hearing in Des Moines that, if marketing orders do become a part of the turkey industry, they should be changed so that controls would be placed more directly on turkey production through allocations for turkey growers.

It was apparent that few growers, even though they might favor marketing orders, would vote for them as now written. As at other hearings, opposing witnesses outnumbered the proponents. In this regard, the hearing examiner said, "It isn't the numbers that count, it's what witnesses say when they get up here (on the stand)." The examiner repeated this opinion in various ways during the

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'Dull' Session At Albany Ends Hearing Series

By Special Correspondent

ALBANY, N.Y.—The final session of turkey marketing order hearings conducted here early this week provided a field day for opponents, but the session itself could be described as somewhat dull. Audience participation—unlike that at other hearing sessions—was virtually nil.

A marketing order proponent, Horton Almond of Ft. Covington, N.Y., director of markets under New York's Harriman administration, attempted to testify as an expert on marketing orders. However, he was virtually disqualified as an expert witness when he agreed that New York marketing orders are different in principle than

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FEEDSTUFFS *Features This Week*

RUMINANT RESEARCH—Selected ruminant research from the American Society of Animal Production meeting is presented on **page 10.**

ACCOUNTING FOR BROILER GROWERS—Effects of cash and accrual accounting as applied to growing broilers are discussed **on page 36.**

AMINO ACIDS FOR LAYERS—Research on amino acid requirements of laying hens is discussed on **page 60.**

HOG FEED BUSINESS—Performance proof tests and service have helped build hog feed volume for an Iowa firm. **Page 78.**

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Big Broiler Price Gains Recorded

By ROBERT H. BROWN
Feedstuffs Special Correspondent

ATLANTA — Santa Claus really came to broilerland this week, bringing higher prices and good cheer and also speculation as to whether the industry may be pulling itself out of the depths of despair by its own bootstraps rather than by government assistance.

Spiralling prices, brought about by shortages and bad weather, caused buyers to up their offering prices. Although sales were few at 17¢ lb., some were reported in Georgia. And the "mostly" quoted prices were 15¢ at farms. Delivered prices were even higher.

This was the highest peak the market has reached since April 6, when prices began declining leading to the most disastrous depressive cycle in the history of the industry.

Processing plants were reported in short supply. Some plants were reporting they are being handicapped in filling orders on hand by the lack of birds being offered by growers.

Bad weather, which brought a deluge of rain in almost record propor-

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AFMA: Orders Would Affect Efficiency, Costs

By Special Correspondent

ALBANY, N.Y.—In testimony representing the American Feed Manufacturers Assn., the organization's director of market research this week said AFMA has not taken an official position for or against the proposed turkey marketing orders, but added, "In the final analysis it seems clear that the orders would impair efficiency and increase costs" and "these considerations should be weighed against possible producer benefits from the proposed orders."

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Turkey Orders' Effect On Grower-Processor, Breeder Held Unfair

By Special Correspondent

OKLAHOMA CITY — The predicament which proposed marketing orders would create for the small turkey farmer-processor received considerable attention in private conversations here during the hearing staged by the U.S. Department of Agriculture Dec. 4-6. It was generally agreed among a group of observers that this type of special enterprise would be severely handicapped

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Turkey Output May Be Down 5-10%

By DON E. ROGERS
Feedstuffs Staff

GRAND RAPIDS, MICH. — If the free market determines the actual number of turkeys raised in 1962, it appears likely that production will be down 5 to 10% from the big 1961 total. A bigger reduction than 10% would appear to be needed to get prices back to really profitable levels.

It is possible that some kind of turkey marketing order will be placed in effect for the 1962 turkey crop, and this would change the outlook. However, it is quite possible that the reduction in numbers marketed would not actually be any greater or even as great as would occur without such an order.

These were among the points made by Dean McNeal, executive vice president of The Pillsbury Co., Minneapolis, in a talk on the feed industry outlook at the Michigan Feed & Grain Dealers Assn. convention in Grand Rapids.

Mr. McNeal, who is chairman of

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Survey Predicts: Fewer Poults; Broiler, Egg Prices Under 1961

CHICAGO — The Poultry Survey Committee has predicted: Although the situation currently is highly uncertain, a cutback of 5-7% in the January - June turkey poult hatch seems likely; broiler prices in the first quarter of 1962 will be below a year earlier, but in the April-June period they will be up somewhat from 1961; egg prices during the first half of 1962 will be several cents below a year earlier.

More specifically, the committee, which met here last week, foresees:

• The turkey poult hatch for the first half of the coming year may be down about 5 to 7%. Supplies from this hatch should move to market during the 1962 fall season at about an average farm price of 21¢ lb., about 2.5¢ above 1961.

• U.S. farm broiler prices are expected to average 15.5¢ in the first quarter of 1962, or 1.5¢ below a year earlier. For the second quarter, prices may average 15¢, or 1¢ higher than in the same period of 1961. There is some possibility that July-December marketings will be under a year earlier.

• U.S. farm egg prices during the first quarter of 1962 will average 32-33¢ doz., or 5-6¢ under a year earlier. April-June prices may average 28-29¢, or 3-4¢ below a year earlier. While egg prices will be lower, the hatch of egg-type chicks the first half of 1962 may equal that of the same period in 1961.

The committee is comprised of four top college poultry economists. They are: Dr. Ralph L. Baker, Ohio State University; Dr. William R. Henry, North Carolina State College; Dr. Richard L. Kohls, Purdue University, and Dr. Henry E. Larzelere, Michigan State University. Several additional economists from industry and the U.S. Department of Agriculture serve in an ex-officio capacity. The committee's work is co-sponsored by

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HAPPY HOLIDAYS

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EDITORIAL STAFF—George L. Gates, Editor; Roger Berglund, Managing Editor; Fred E. Tunks, News Editor; John Cipperly, Washington Correspondent; Emmet J. Hoffman, Merchandising Editor; James K. Rutter, Russell Tokheim and William J. Dorn, Editorial Assistants.

WASHINGTON CORRESPONDENT—John Cipperly, 604 Hibbs Building, Washington, D. C., Telephone, Republic 7-8534.

ADVERTISING STAFF—Wilfred E. Lingren, Advertising Director; Carl R. Vetter, Advertising Department Manager; Bruce A. Kirkpatrick, Advertising Production Manager; Leland C. Hubert, Assistant Advertising Production Manager; R. Dale Swenson, Promotion Manager.

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Best Wishes

THE CONTRASTING blessings of the Christmas season become more meaningful each year. There is the calm of our places of worship and in our homes made more peaceful at times by the steady softness of the tree lights. And there are the more outwardly stimulating bursts of warmth in wishing old friends well that would do wonders if applied with the same enthusiasm and devotion the year around. There are the opportunities to reflect on the magnificent capacity of youngsters to soak up joy and reflect it back with such intensity.

There are also such opportune moments as this to bundle these thoughts together and wish you an abundance of the season's blessings that are most rewarding to you. Merry Christmas and Happy Holidays!

Top of the Hopper

MORE AND MORE discount farm supply stores are being established in the Midwest, and some observers feel that their impact on merchandising in rural areas will shortly rival the big upheaval in city and suburban merchandising brought about by discount houses. The term "fleet store" comes from a retailing policy of discounting to large farmers—owners of truck and tractor fleets.

One store owner in Illinois says he's taking a healthy slice of volume away from every farm store in a 40-mile radius. Others report similar success in moving broad lines of merchandise. Says one operator: "Our success lies within the high markup on most farm supplies, plus the absence of promotional efforts, complete inventories and modern merchandising methods in most farm stores." Most fleet stores are organized for volume, use tested display methods and advertise heavily. There are reported to be 20 in Iowa alone.

Apparently this new merchandising development hasn't moved into the feed field to any extent, and perhaps the nature of feed distribution is such that it will not be affected. However, nothing is impossible in this day of retailing revolution, and the mass merchandising fever could have some important influence on feed merchandising—if not directly, certainly through its impact on sales of related items handled by feed dealers.

THE USDA TIMETABLE on turkey marketing orders is an important factor in turkey production planning, and the industry generally is uncertain as to what's going to happen next. A referendum probably can't be held for at least a couple of weeks, following conclusion of regional hearings, and it is likely to be delayed until after the National Turkey Federation convention Jan. 9-11.

In spite of the predominantly anti-marketing order testimony presented at hearings, many observers feel that a referendum definitely will be held. There are indications that USDA has had plans well under way for the vote for some time. With a late January referendum, and assuming approval, observers believe that regulations and other machinery couldn't be put into gear before March or April. This uncertainty has resulted in considerable caution in forecasting turkey production prospects.

WE ARE INDEBTED to the Georgia Poultry Times for this report from the recent meeting of the Broiler Stabilization Advisory Committee. Orville

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How's Business?

AN EVERY WEEK REVIEW OF FORMULA FEED BUSINESS VOLUME, INCLUDING PRICE, SUPPLY AND DEMAND TRENDS

Feed business reports in this pre-holiday week ranged from the cheerful side to statements that it was just plain "disappointing." However, there were more of the bad tidings than the good.

Broiler prices continued their upward movement, making for some happiness in the big broiler production areas even if feed volume was not up.

Big volume movers in some areas continued to be beef, dairy, swine and some poultry rations.

Most price lists will be about unchanged from a week earlier, feed men said.

The wholesale feedstuff price index advanced 2.1 points to 84.8 points compared with 75.5 a year earlier. The feed-grain index was up 1.1 points to 64.4, as against 60.0 a year earlier.

The hog-corn ratio, based on Chicago price, advanced to 15.4 this week from 14.7 last week. That compared with 17.6 a year earlier. (Major market roundup and ingredient quotations appear on pages 94-96.)

Northwest

Volume of business for feed manufacturers in the Northwest this week was about the same as or slightly better than last week. Where there were increases in business, credit generally went to the eight to nine inch snow cover over much of the area and the colder weather.

Hog, cattle, dairy and poultry feed lines continue to be good movers. Turkey feed is very slow.

Most manufacturers indicated that price lists will be about unchanged to slightly lower.

Southwest

Formula feed business in the Southwest this week showed the first signs of slowness in the last few months. The factors responsible for the slower operations were mainly a resistance to the higher formula feed costs, well stocked dealers and the approaching holiday period.

The first severe winter weather of the season hit this area, which should encourage heavy feeding. Some mixers reported that shipments of cattle feeds were stepping up again, indicating some need to replenish stocks. One trade source reported that most new cattle feed sales now being made were on a price date of shipment basis.

Hog feed and egg feed sales continue to be an important part of the total volume. The broiler feed trade was encouraged by the improvement in broiler prices which was brought about by offerings of fryers and broilers being short of trade needs.

Mills will operate on a five-day schedule in most cases and price lists will show few changes from the previous week.

Central States

This week has been somewhat of a disappointment as far as sales of feed are concerned. Volume has fallen off from that of late November and suffers by comparison with December, 1960.

The country trade has been backing away from offerings of feed, and some are of the opinion that the price has had a great deal to do with it. Little or no overtime is being put in although most plants are operating on a full 40-hour week. The sharp drop in temperatures all over this area, along with snow and ice covering, brings up hopes of some broadening in demand in the very near future.

Northeast

With few exceptions, mixers' running time ranged from 32 to 36 hours from western New York to the New England states. This represented a drop of eight hours in the latter area. A few mixers in both sections chalked up a 40-hour week.

Heavy snows in the western New York dairy belt could boost dairy feed demand. Sales in general in the area were about steady with the previous week. Turkey feeds continued to decline, but dairy feed and egg mash volume held up well. Not much was done on broiler feeds.

Dairy feed sales in the New England states were excellent. But poultry and egg mash turnover was steady to lower as a previous cutback in hatchery eggs manifested itself in a scarcity of birds to feed.

South Central

Formula feed demand holds at a good level, practically unchanged from a week ago. Overtime may not be quite as heavy for some units as last week, but manufacturers generally are maintaining five-day operations and six-day runs are not uncommon.

Representatives say prospects for the balance of the month are good and will be even better if the current cold wave continues. They are not quite so confident about the first few weeks of the new year, pointing out that the heavy outgo of cattle feeds this month is digging a big hole in their outstanding bookings.

There is no let-up in the sales of hog and pig feeds, and none is expected to take place soon. The major share of mill operating time continues to be devoted to these two items. Dairy feeds are moving fairly well at present and some further improvement is expected shortly. Poultry feed business is described as just coasting along, getting neither better nor worse.

Ohio Valley

Movement of formula feeds was very slow in the Ohio Valley this week.

Demand for cattle and dairy feeds was fair. Hog feed demand continued good. Demand for poultry and eggs was light at the retail level, with prices remaining steady.

Delmarva

Broiler prices in the 17¢ and 18¢ range speak for themselves concerning business in Delmarva.

Six months of record low prices have taught those in the broiler business many new ways to cut costs, and broiler feed prices remained the same last week as the previous week while the price of broilers increased. Therefore the meat-feed ratio was much improved. A pound of broiler meat would buy 3.3 lb. of feed. The last time a ratio came close to this was

(Turn to **MARKETS**, page 99)

S.E. Broiler Credit Trimmed, But Still Ahead of Year Ago

ATLANTA — Although outstandings of credit extended by feed manufacturers in the Southeast declined an estimated 9% during October this year, total outstandings of trade credit at the end of the month were about 14% higher than a year earlier.

This picture of credit advanced by selected feed manufacturing plants in Alabama, Florida, Georgia, Louisiana, Mississippi and Tennessee is indicated in the latest monthly survey of the Federal Reserve Bank of Atlanta.

The bank's research department also reports that a survey indicates a similar situation for broiler production loans made by representative banks in the Southeast.

While loans outstanding for broiler production at surveyed banks in the sixth federal reserve district declined 4% in October, they still exceeded year-earlier levels by about 18%.

The Atlanta bank reports that the volume of new bank loans for broiler production in October of this year was about 5% ahead of September's volume and a whopping 296% ahead of October, 1960.

Total outstandings of loans to both dealers and producers during October were reduced because October repayments amounting to $1,857,000 exceeded the October new loan volume of $1,783,000.

The trade credit survey showed that producer accounts were curtailed more than dealer accounts in October, the same as in September.

Broiler placements in the federal reserve district's six states declined slightly further in October, and broiler prices received by farmers in district states in mid-October edged up to 11.3¢ lb. from the 11¢ average of a month earlier.

North Carolina Feed Group Elects

RALEIGH, N.C.—The North Carolina Feed Manufacturers Assn., at its annual business meeting held in conjunction with the North Carolina Animal Nutrition Conference, elected new officers.

James M. Westall, Earle Chesterfield Mill Co., Asheville, was elected president. He succeeds D. H. Taylor, Leco Feed Mills, Kinston.

L. C. (Buck) Howell, Siler City (N.C.) Mills, was named vice president; Ted C. Drum, Hickory (N.C.) Feed Mills, was elected secretary, and new directors include J. L. Maxwell, Goldsboro, Dennis Ramsey and Mr. Howell.

ELECTED—James M. Westall, left, Earle Chesterfield Mill Co., Asheville, N.C., has been elected president of the North Carolina Feed Manufacturers Assn. He succeeds D. H. Taylor, Leco Feed Mills, Kinston, right.

MICHIGAN OFFICERS—Edward Baur, center, Little Brothers Co., Kalamazoo, will head the Michigan Grain & Feed Dealers Assn. during the coming year. He was elected president at the annual convention in the Pantlind Hotel, Grand Rapids, Dec. 6-8. Congratulating the new president is Ray Bohnsack, Farm Bureau Milling Co., Lansing, retiring president. Nevels Pearson, left, was reappointed executive secretary. Monte Kahlbaum, Kahlbaum Brothers, Carleton, Mich., second from right, was elected vice president, and Gary Marshall, right, Lansing Grain Co., Lansing, was reelected financial secretary-treasurer.

ALBANY

(Continued from page 1)

the proposed turkey orders. In addition, he admitted to having no knowledge of the turkey industry. Mr. Almond was, however, permitted to testify as a consumer, but little cross examination ensued.

Only two additional proponent witnesses were called the first day and four the second day of the two-day, final hearing session. These included a grower of 25 turkeys in 1961, who never has grown more than 50 turkeys in any one year. Another proponent witness has never grown more than 100 turkeys a year and another grows 1,200 per year as a fill-in for his chicken business. These were the first small growers of this nature to testify during the hearings. They felt that turkey orders might be their salvation, although confessing to having little understanding of the proposals.

Oakley Ray Testifies

Oakley M. Ray, research director for American Feed Manufacturers Assn., testified neither for nor against. He did, however, call to the attention of the secretary of agriculture many possible effects of a dangerous nature that likely would be experienced with the implementation of the proposed order or any other orders that might be developed. He was severely cross-examined and refused, as an expert witness, to yield to any suggestions that workable orders could be drawn up by any committee or board.

Twenty-five witnesses testified against the proposed turkey marketing orders. Among the key witnesses opposing the orders was Robert Bitz, a Plainville, N.Y., grower-processor, who painted a clear picture of how the northeastern turkey industry differs generally from the turkey industry in much of the rest of the country. He made a forceful statement indicating that the proposed orders would invoke undue prejudice and economic pressures on northeastern turkey growers. He pointed out that practically all northeastern turkey growers sell fresh dressed, premium turkeys that they grow, process and retail themselves.

David J. Chuckrow of Troy, N.Y., testified that the proposed orders would put the government in competition with him in foreign marketing and in selling to schools, government agencies and the military services.

E. J. Webster, representing the National Association of Frozen Food Packers, Washington, opposed the proposed marketing orders generally and asked for exclusion of the "convenience food" industries if any orders are enacted. Also, he suggested changes that would limit any orders to the fresh and fresh-frozen table markets which comprise 85% of the over-all turkey market.

Peter C. Crafts, Grassmere, N.H., turkey breeder, grower, hatcheryman and processor, was another star witness against the proposed orders. Mr. Crafts is a past president of the National Turkey Federation, a director of the Northeastern Poultry Producers Council, a former member of Secretary Benson's advisory committee and an alternate member of Secretary Freeman's turkey advisory committee.

Proposals Date Back

Mr. Crafts said that the present order proposals date back in their development five or six years, "when a few breeding people tried to get too big and now need protection for their built-in inefficiencies and other problems growing out of their bigness and selfishness."

Mr. Crafts also said the hatching egg phase of his business is the most important phase and has been the most successful part. He indicated that hatching egg prices have been fairly constant over the last three years and he does not think hatching egg producers have suffered financially. He concluded that this indicates a complete lack of need which, under the act of 1937 as amended, would theoretically be for the benefit of the producer of hatching eggs. This statement was concurred in by Arthur di Paola, a Trenton, N.J., hatcheryman-grower.

Opposition testimony of Northeastern Poultry Producers Council was presented by William Gozzi of Milford, Conn., director of NEPPCO's turkey division. (Many of the objections Mr. Gozzi mentioned appeared in a story on page 7 of the Dec. 9 issue of Feedstuffs.)

Gilman T. Dedrick of Freeville, N.Y., a salesman for Commercial Solvent Corp., New York chemical firm, testified on terms and provisions. Mr. Dedrick read into the record technical and detailed data.

Deadline for Briefs

G. O. Hyde, chief hearing examiner for USDA, announced that Dec. 30 has been set as the final day for filing briefs with written arguments pertaining to the hearing transcript. Such briefs may be printed, typed, or mimeographed in six copies. A Dec. 30 postmark is acceptable in meeting the announced deadline.

After the briefs have been filed, USDA may announce new marketing order proposals. This may involve one or more orders. Additional objections can be filed after such announcement and before any referendum is held, if such referendum is finally scheduled. If it is, voting will be by mail ballot in so far as possible. However, it will be possible for growers to vote at specific locations to be announced.

Marketing Order Discussions Set For NTF Meeting

DALLAS — The proposed turkey marketing orders are expected to be the main topic of discussion at the National Turkey Federation convention Jan. 9-11 in Dallas.

In addition to the informal conversations about marketing orders, the formal convention program will include a marketing order question-and-answer session as a special feature.

In a meet-the-press type session Jan. 11, Dr. James T. Ralph, assistant secretary of agriculture for stabilization, will answer questions on proposed marketing orders from four poultry industry editors.

The program for the big turkey convention also will include talks on the industry outlook and trends, research clinics and breeder and management workshops.

Preliminary committee, business and other NTF meetings will take place Jan. 7-8, with the main convention program and exhibit being presented Jan. 9-11.

The Baker Hotel will be the location of various committee and other meetings; the Hotel Adolphus lobby will be used for advance registration and that hotel's ballroom will be the site of a grand banquet and a "coffee gobble." The Dallas Memorial Auditorium will be the location for all group sessions and larger functions, and will house exhibits and turkey shows.

The meet-the-press program will be at 2 p.m. Jan. 11. Following Dr. Ralph's address on the subject, "Opportunities for Self Help Programs in the Turkey Industry," he will answer questions from J. H. Florea, editorial director, Watt Publishing Co., Mt. Morris, Ill.; Robert Fiser, editor, Poultry and Eggs Weekly, Kansas City, Mo.; Albert Schwartz, editor, The Poultryman newspaper, Vineland, N.J., and Don M. Turnbull, editor, APHF News, Kansas City, Mo. Dr. L. A. (Tiny) Wilhelm, Quaker Oats Co., Chicago, will guide the discussion.

Throughout the convention, approximately 135 exhibitors will have booths in the auditorium, showing equipment, supplies and services.

Advance registration will be Monday afternoon and evening, Jan. 8, in the Hotel Adolphus lobby.

Cyanamid Facility Described at Meeting

CHICAGO—The new research and development center of American Cyanamid Co.'s agricultural division was described by Dr. John A. King, manager of research and development, in an address at the recent meeting here of the American Society of Animal Production. The center is located near Princeton, N.J.

In his speech, Dr. King emphasized the need for aid from university and experiment station scientists in testing new products. He also pointed out that Cyanamid's diversified grant-in-aid program has been revamped to coincide more closely with the economic needs of agriculture.

"The expansion of Cyanamid's research and development program should result in improved and radically new products for both the animal feed and animal health industry," he stated.

ENTER FEEDLOT BUSINESS

BEST, TEXAS—The Price Turner & Sons Ranch has entered the feedlot business and is currently feeding out 230 steers. Feed mixing facilities and lots will provide maximum capacity for about 400 head. The Turners have raised registered cattle and have fattened bulls on consignment in the past.

Turkey Poult Hatch Down

WASHINGTON — In addition to being low seasonally, turkey poult production, reflecting extremely low turkey prices, is down from a year ago.

The latest U.S. Department of Agriculture hatchery report shows that heavy white breed poult output in November was up somewhat from 1960, but the hatch of other heavies and light breeds was down sharply. Figures on eggs in incubators indicated a similar situation for December.

Heavy white breed poult output in November was about 1.3 million or 4% above a year ago. The hatch of other heavy breeds, at 381,000, was down 46% from 1960, and the light breed hatch, at 280,000, was 54% under November last year. Total poult production for the month was 23% below 1960.

Eggs in incubators on Dec. 1 indicated that the heavy white breed hatch for this month will be about the same as or slightly less than the hatch last year. Indications for other heavy and light breed hatches are for considerably smaller hatches than in December last year.

Egg-Type Chick Hatch Continues To Show Gains

WASHINGTON — The off-season hatch of egg-type chicks continues to show an increase over a year ago, particularly in certain areas, and this adds to concern about the outlook for egg prices in the next year or two.

While the hatch is now seasonally low, it has been showing some sharp percentage gains in recent months over a year earlier. It appears that the gain in December will be less marked, however.

The broiler-type chick hatch, meanwhile, is showing some decreases from a year earlier after consistent increases through most of 1961.

The U.S. Department of Agriculture reported this week that the egg-type chick hatch in November totaled 20,659,000—up 24% from a year earlier. Eggs in incubators on Dec. 1 indicated a slightly larger egg-type hatch during December than a year ago.

For November, some of the largest increases in the egg-type chick hatch were in the east north central states, particularly Indiana and Illinois; Connecticut; Iowa; North Carolina; Mississippi; Alabama; Arkansas, and California. Other states and areas also showed gains, but there were decreases, too.

A varied situation also was indicated for December, with both increases and decreases in numbers of eggs in incubators on Dec. 1 among the different regions. Here are the percentage changes from a year ago in eggs in incubators: New England, down 5%; middle Atlantic, down 14%; east north central, up 16%; west north central, down 9%; south Atlantic, up 16%; east south central, up 55%; west south central down 19%; mountain states, up 12%; Pacific Coast, up 4%.

Production of broiler-type chicks in November was some 142.5 million, down 1% from a year ago. Eggs in incubators on Dec. 1 indicated that the broiler-type chick hatch in December will be slightly below last year.

Figures on broiler-types in incubators on Dec. 1 indicate decreases from a year ago in all regions except the south Atlantic, east south central and mountain states. Some of the largest percentage decreases are in northern areas, including New England, middle Atlantic states and the east north central states; also, the Pacific Coast.

2 Major Feed Firms In New York End Broiler Contracts

ONEONTA, N.Y.—Broiler growers and other sources in south central New York and northern Pennsylvania reported this week that two major New York-based feed manufacturing concerns are terminating broiler-growing contracts. This action, it was said, would cut the volume of poultry meat produced in the areas to an insignificant amount for at least the immediate future.

Informants said that in addition to terminating broiler-growing contracts, Beacon Milling Co., Cayuga, N.Y., and Cooperative GLF Exchange, Ithaca, N.Y., will end contracts with processing outlets soon. In the areas affected, Beacon and GLF had about 1,600,000 birds on feed at one time.

In a recent talk to a group of Susquehanna Valley producers here, Harold G. Smith, G.L.F.'s livestock contracting manager, was quoted as saying G.L.F.'s decision to terminate growing contracts was motivated entirely by economics. He said the past year's crash in broiler prices forced the decision.

According to The Poultryman, poultry industry newspaper, G.L.F.'s spokesman admitted the immediate future is not rosy for the New York broiler grower, but added that there might be a chance for a few broilermen to switch to growing started pullets for hatchers.

It was reported that not all of the producers involved are dependent entirely upon income from broilers, but some growers said they would be forced out of business because of investments in growing facilities.

Under contracts now being terminated, both Beacon and G.L.F. provided chicks and feed, it was reported. The Poultryman also said growers under contract to G.L.F. and Beacon began having their payments reduced last April.

Rise in Bad Debt Losses Noted by The Pillsbury Co.

MINNEAPOLIS—Higher bad debt losses in its formula feed division due to low prices received by many broiler and turkey raisers were noted by an official of The Pillsbury Co. in commenting on that firm's operations for the first half of the current fiscal year.

Many of these growers are losing money "causing higher bad debt losses for suppliers such as Pillsbury that finance the sales," said Terrance Hanold, vice president and treasurer of the firm, who was quoted in a Dow-Jones report. He also said that the firm lost money on its broiler production in Alabama in the fiscal first half.

Mr. Hanold declined to predict company profits for all of fiscal 1962, but he commented, "The positive factors will continue to work in our favor, and the adverse factors ought to lessen in effect" during the remainder of the year.

Mr. Hanold said that the firm's sales are continuing to increase in all divisions and pointed out that sales for the six month period ended Nov. 30 were "at least 3%" higher than year-earlier levels.

"We feel pretty confident about our ability to maintain the rate of sales gain through the last half of the fiscal year which ends May 31, 1962," he added. But, he said, Pillsbury did not know yet if increased sales had enough effect on earnings to offset lower profit margins in feed and flour.

Pillsbury's earnings for the year ended May 31 were $7,911,265 on sales of $384,962,436. Sales for the previous year had been $373,818,795.

Low Prices Affect Shape of Delmarva Broiler Industry

By KELVIN ADKINS
Feedstuffs Special Correspondent

SALISBURY, MD. — What effect has the six-month slump in price had on the broiler industry in Delmarva? Well, no one is going to tell you how bad off financially he is. And if he isn't hurting so much, he isn't going to let his competitors know his present state. But looking around and listening, there are indications of what is going on.

One of Delmarva's largest feed manufacturers (with present production of 16 million birds a year and sights on 20 million) has acquired a processing plant. The firm already had the feed mill, local grain production, broiler growers, hatchery and hatching egg producers. This just about makes this firm's business completely integrated.

By getting the processing plant, this firm, so the story goes, has been getting broilers which had been going to another nearby processing plant. Processing plant "B" was without broilers. So processing plant "B" has gotten into the broiler-contracting business.

Here is a second-hand report of plant "B's" problem as a contractor: According to the report, a flock of 5,500 birds was sold. Feed conversion and average weight were up to par. There was no appreciable amount of disease, mortality was in good shape, and in every way it was at least average in quality. The selling price was 13.7¢.

It was reported that $885 was lost in production costs. On top of this, plant "B" had obligated to pay the grower a guarantee of $60 per thousand. This was a total loss of $1,215 or over $200 per thousand.

Share-the-Risk Plan

Another feed manufacturer with a mill in Delmarva has mills in other broiler areas. A broiler contract where the broiler grower, mill and hatchery all share the profit or loss has been used with much success in at least one of the broiler growing areas. So the firm made the policy that this contract would be used throughout.

The local mill took the risk of losing its broiler growers when converting to the new contract. They hoped to keep at least 50%. As an end result, more than 75% accepted the contract. Looking over the statement of settlement, a grower under the contract produced 10,000 birds. The selling price was 11.67¢. Only $77.17 was the grower's share for 10 weeks' work, or slightly over $7 per thousand.

Hatcheries under this set up get a base price per chick plus 25% of

(Turn to DELMARVA, page 8)

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Delmarva Broilers Jump 2c in Week

By Special Correspondent

SALISBURY, MD.—Most broiler prices recorded late this week in Delmarva were 2¢ lb. higher than a week earlier. The new levels averaged near 17¢ lb.

The latest jump in prices put the current price for broilers above the level recorded in the corresponding week of 1960, a situation the industry here was beginning to think had gone out of style.

Added to last week's price jump of 1½¢, the recent price gains have put some optimism back into the Delmarva poultry industry. Even so, observers say, hatcherymen aren't yet too excited about the way prices have climbed. Egg settings in Delmarva last week were 3% below the comparable week of last year.

MARKETING AWARD — Russell H. Eshelman, left, vice president, marketing, Hess & Clark, Ashland, Ohio, is pictured accepting, on behalf of Hess & Clark, an award for marketing accomplishments from Emanuel Goren, Sulray, Inc., president of the Marketing Executives Club, New York.

Hess & Clark Wins Marketing Honors

NEW YORK—Hess & Clark, maker of nitrofuran drugs and other feed medications and animal health products, has been cited for marketing excellence by the Marketing Executives Club of New York. A certificate of special merit was recently presented to Hess & Clark, Ashland, Ohio, a division of Richardson-Merrell, Inc., "for an outstanding example of new frontiers in marketing" at the club's annual awards luncheon. Russell H. Eshelman, vice president, marketing, Hess & Clark, accepted the honor for the company.

Judges considered Hess & Clark's entry as one of the "most imaginative and effective" marketing ideas and plans used for the successful expansion of an established product during the past year. Other recipients receiving similar awards were the Douglas Fir Plywood Assn., Johns-Manville, and Heublein, Inc.

The Hess & Clark entry was based on the company's program to promote the FPI (Full Performance Index) concept to poultrymen throughout the U.S., citing to them the importance of good feeding, good breeding and good management in profitably producing quality eggs. The campaign spelled out the reasons why poultrymen "should use nf-180 protective feeding for layers as part of good health management."

The marketing approach to the campaign called for an integrated effort of trade and consumer advertising, public relations, sales promotion, merchandising and direct sales contact. Klau-Van Pietersom-Dunlap, Inc., is the advertising and public relations agency for Hess & Clark.

Earlier in 1961, the Chicago Area Agricultural Advertising Assn. presented Hess & Clark with the organization's "Top Ten Award." This citation pointed out the company's "outstanding achievement in advertising to the farm market" and was judged to be one of the ten best agricultural advertising campaigns of 1960-61.

NEW MILL OPERATING

MAPLETON, IOWA — The new $112,000 mill at Mapleton is now in operation by the Farmers Co-op Oil Assn., according to mill manager Gale Polly. The pushbutton mill has facilities for grinding and mixing feed, cracking and rolling grain, warehousing and grain storage. The business also has a new 60 ft., 50 ton scale.

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USDA Examines Industry Trends

WASHINGTON — If you want to have a look at some extensive survey details on structure and practices of the feed mixing industry, a copy of the survey report is yours for the asking.

The mail survey was made by the Economic Research Service of the U.S. Department of Agriculture. It was designed to examine economic trends in the feed industry.

The survey covered eight states, selected to represent different types of livestock and poultry production and different types of feed mixing companies. Two thousand usable returns were used in making the analysis and report.

In general, the survey tends to confirm a number of practices, trends and developments which have been evident in the industry. For example, the report refers to developments in financing and in integration; and it notes that an increasing number of feed manufacturers and retailers are providing bulk delivery service, selling direct, custom mixing and providing grain bank services.

Also, the survey indicates that there is a great deal of feed mixed in various types of industry establishments, if one includes custom mixing as well as conventional manufacturing of feed—possibly more than has been assumed in some cases. However, there can be a good deal of duplication of tonnage when figures for all types of manufacturing and mixing establishments (many of which use supplements manufactured elsewhere) are lumped together.

Report Available

(A copy of the 27-page survey report — called "The Changing Feed Mixing Industry—Practices in Selected States," Marketing Research Report 506 is available free from the Office of Information, U.S. Department of Agriculture, Washington 25, D.C.)

The states surveyed in the study were Massachusetts, Pennsylvania, Georgia, Indiana, Iowa, Colorado, California and Washington. Figures for each state on various aspects of feed mixing and selling are presented.

The study apparently was designed primarily to cover feed mixing, but some of the respondents retail feed only and do not mix. The classifications by functions as designated in the report were: Retail only, retail and mix, and mix only. It was not entirely clear how integrated operations which feed much or all of their own feed to their own birds or animals fit into the classifications, although presumably many identified operations as "retail."

The survey forms were mailed out early in 1960, and the data are on 1959 operations of the firms responding.

The report on the survey was prepared by agricultural economists Carl J. Vosloh, Jr., and the late Dr. V. John Brensike, both well known to many in the industry. Dr. Brensike died last July.

The survey respondents mixed 16,777,000 tons of feed in 1959—which is a lot of mixed feed. This figure is compared with the approximately 40 million tons of manufactured feed reported for the U.S. Also, state comperisons were made between volume of mixed feed reported in the survey and volume of formula feed based on state regulatory or other reports.

However, one should note that most official reports deal with registered "manufactured" feeds and do not include custom-mixed feeds. With some livestock feeds, the proportion of manufactured supplement in the total custom mix can be quite small. (The USDA report lumped all mixing together and, as noted in the report, this can result in double counting of tonnage.)

About 85% of the establishments surveyed were retailing feed—many in small volume. Seventy per cent of the establishments surveyed were feed mixers or manufacturers. The percentage who mixed varied widely —from 21% in Massachusetts to 89% in Indiana.

Here are some of the points brought out in the survey report:

RETAILING—Nearly two thirds of the "retailers" mixed feed at their establishments, with the percentage varying, as expected, among different states. The industry continues to have many small volume retailers, where feed presumably is just one part of an agricultural business. Between 33 and 41% of the retail establishments sold less than 500 tons of mixed feed per year. It appeared that once an establishment has obtained a retail volume of 3,500 tons a year, there is a strong tendency to install mixing facilities.

Types of Feed—Reflecting commercialization and integration in poultry, broiler feed tended to represent a larger proportion of mixed feeds sold by large retailers than by small retailers in some states, and large retailers in several states tended to sell a larger percentage of feed as some type of poultry feed than small retailers.

Many small establishments retail two or more brands of feed.

Retail Practices — Establishments with full-time salesmen increased as annual retail volume increased. Also, retail mixers tended to use more salesmen than purely retail establishments. . . . Percentage of sales volume delivered tended to increase with total volume. . . . Figures on proportion of sales to the five largest feeder customers indicated that most retailers, especially smaller ones, must retain a few large customers. "If small retailers lose these customers as farms increase in size or become integrated, or through failure to keep up with feeders' knowledge of nutrition, the nature of the industry could change drastically," the report said.

Integration and Credit — Feed retailers in every state used feeder contracts of some type, with use varying from little to 100% of a firm's volume. In areas of specialized production, integration with farm production may be the only way to expand or retain volume, the report said. Percentage of retailers and retail-mixers involved in integration and contracts increased as volume increased. The feeder contracts ranged from conventional contract production to limited involvement.

Most retailers said they did not wish to provide production credit, but many said they guaranteed production credit obtained from lending agencies. Nearly all retail dealers, whether or not providing production credit, did provide "short term" credit, with time of free credit varying.

(Turn to **TRENDS**, page 98)

NEW SALES OFFICE—Charles Bowman & Co. and Bowman Feed Products, Inc., celebrated the opening of their new sales office in New York's Daily News Building with the signing of a continuing agreement with Philips Roxane, Inc., N.Y., for the distribution of their vitamin D products in the U.S. Seated with Mr. Bowman is Stephen R. Sills, Philips Roxane vice president. Standing, left to right, are Robert Callahan, manager, Philips Roxane international division; Kenneth M. Walters, executive vice president, Bowman Feed Products, and John K. Pierce, executive vice president, Charles Bowman

Central Soya Sells Three of Its Elevators

CHICAGO—Purchase by Continental Grain Co. of three elevator properties from Central Soya, Ft. Wayne, Ind., has been announced here.

The three properties include Central Soya's 6 million bushel capacity Chicago grain elevator "A" and two smaller ones on the Illinois River, one at Seneca, Ill., and the other at Lockport, Ill., each having a 200,000 bu. capacity. The smaller elevators had been serving as collection points for the large Chicago terminal plant.

Confirmation of the transaction was concurred in by Michel P. Fribourg, president, Continental Grain Co., and Dale W. McMillen, president, Central Soya.

Continental's elevator capacity was raised to around 110 million bushels by the new acquisition. Continental will take over the acquired properties Jan. 2, it was stated.

Mr. McMillen commented, "These facilities were acquired through the purchase of the Chemurgy facilities from the Glidden Co. last August. For Central Soya, the sale of these fine facilities will generate capital which, we believe, can be more advantageously used in our other operations."

Cooperative GLF Officers Reelected

ITHACA, N.Y. — Officers of Cooperative GLF Exchange, Ithaca, were reelected at an organization meeting of the board of directors.

J. C. Corwith, Water Mill, N.Y., was reelected president and Clifford E. Snyder, Pittstown, N.J., was reelected vice president. Both have been members of the board since 1932 and each is in his ninth term of office.

Employee officers renamed are Edmund H. Fallon, general manager; William J. Fields, treasurer; R. Bruce Gervan, secretary; George R. Pfann, general counsel, and Phil D. Stump, controller.

GLF is a purchasing and marketing cooperative with 117,000 members in New York, New Jersey and northern Pennsylvania.

USDA ENDS BROILER BUYING PROGRAM

WASHINGTON—The U.S. Department of Agriculture has announced the completion of a young chicken purchase program which began July 19.

The program ended with the Dec. 7 announcement by the department of the purchase of 930,000 lb. of frozen, cut-up young chickens with funds appropriated under the National School Lunch Act. Prices paid for broilers in this final purchase ranged from 28.85 to 31.50¢ lb., according to the department.

USDA noted that total purchases under the program amount to 37,650,000 lb., at an approximate cost of $10,912,000.

Nulaid Purchases Broiler Operation

SANTA ROSA, CAL. — Nulaid Farmers Assn., San Leandro, large poultry and feed cooperative, has purchased the Cal-Bit Broiler business from Bennett Valley Feed Co. in Santa Rosa.

This is one of the largest broiler operations in northern California.

Government Sale of Feed Grains Discussed

FT. WORTH—Leaders of the grain trade from Oklahoma, Texas, New Mexico and the Texas Panhandle met in Ft. Worth Dec. 15 to discuss government sales of feed grains at administratively determined prices.

The Southwest Grain Council, which is composed of grain and feed trade associations from these areas, organized the meeting, which was open to all grain and feed people.

Truitt Kennedy, president of the council, said prior to the meeting: "The grain trade in the Southwest cannot compete with non-economic pricing of grain by the government, and is being virtually blocked out of its historic business of buying and selling grain sorghums as a result of some of the provisions of the feed grains bill."

He added, "We are not in any sense questioning, at this conference, the right or the propriety of the government's loan to farmers. We are simply hearing protests on the practice of a government agency in taking over the traditional functions of privately owned business."

Since the program is extended through 1962, the conference was designed to give members of the trade an opportunity to comment, or to recommend what, if any, action should be taken, it was stated.

Methyl Esters Cleared As Source of Fat

WASHINGTON — The Food and Drug Administration has issued a food additive order clearing use of methyl esters of higher fatty acids as a source of fat in animal feeds. The action was on a petition filed by Emery Industries, Inc., Cincinnati.

The order cleared use of a product which is "manufactured by reaction of methyl alcohol with vegetable oil or tallow and consists of not less than 70% methyl esters of the following straight-chain monocarboxylic acids: myristic acid, palmitic acid, stearic acid, oleic acid and linoleic acid, and lesser amounts of the associated acid esters."

The order specifies that the product must meet these specifications: free methyl alcohol not to exceed 150 parts per million; unsaponifiable matter not to exceed 2%; free of chick-edema or other toxic factor.

The order also states that the new chick-edema factor bioassay method adopted by the Association of Official Agricultural Chemists shall be used.

TURKEY OUTPUT

(Continued from page 1)

the board of the American Feed Manufacturers Assn., analyzed some of the longer range agricultural and feed industry trends and in addition provided a look at the prospective feed demand and supply situation for 1962. His talk was one of several which dealt with major industry trends, developments and problems. (Some of the others will be reviewed later.)

In general, Mr. McNeal said, adequate supplies of grains and ingredients, increased numbers of livestock units and reasonably favorable prices for most classes of livestock would indicate that 1962 should be a year of increased opportunities and growth for the feed industry.

Here are some of his predictions and comments on the livestock and feed situation for 1962:

Hogs—The 1961 spring pig crop, now going to market, was up 7%. The fall crop is probably up about 3%. An increase in next spring's crop of 2 to 4% over last year seems likely.

The shift in recent years to heavier farrowing in the fall months relative to spring has reduced seasonal fluctuations in hog prices. Unless the spring pig crop next year is significantly more than 3% above the 1961 spring crop, hog prices should remain relatively favorable. A range between about $14 at the low time next winter and roughly $18 at the high time would seem reasonable based on probable supply and demand factors.

Cattle — Cattle slaughter during 1962 will probably be up about 3 to 5% from this year. Total beef production may be up slightly less than this due to the prospect of cattle being marketed at somewhat lighter weights. There is little to indicate any big change in cattle prices in 1962.

Eggs—Since July, chick hatch for laying flock replacements has been up sharply from year-ago levels. The October hatch was 43% above a year ago and eggs in incubators on Nov. 1 would indicate a hatch of 30% or more above November of a year ago. These large increases in the hatch in the "off season" probably reflect a great commercialization of the laying flock. While numbers of potential layers are presently very close to year-ago levels, they will be increasing relative to the previous year in the spring. These increases probably mean that prices received by farmers for eggs during calendar year 1962 will average significantly below prices received during calendar year 1961. The big hazard in eggs next year is that producers may expand their replacement numbers through the spring months relative to last year. This could result in very depressed prices next fall. This should be watched closely during the February-June heavy hatching period.

Turkeys — It appears likely that producers will report on Jan. 1 that they intend to raise fewer turkeys in 1962 than in 1961. If the free market determines the actual number raised next year, turkey production will perhaps be down 5 to 10% from 1961 figures.

Because of a big carryover of storage stocks next fall, a crop of this size in 1962 would result in about the same total supply of turkey meat in 1962 as was available in 1961. However, marketings during the last half of the year would be smaller and thus should allow some price improvement as compared with this year. A bigger reduction than 10% would appear to be needed to get prices back to really profitable levels. Even though time is running out, it is possible that some kind of turkey marketing order will be placed in effect for the 1962 turkey crop. This would change the outlook. It is quite possible, however, that the reduction in numbers marketed would not actually be any greater or even as great as would occur with such an order.

Soybean Meal—Soybean production in the U.S. is up 142,000,000 bu., or 25% from last year. Despite this big crop, the movement from farms has been slow and prices have generally held at or above local support levels. These beans will be available later in the year, however, and it looks like there will be a sizeable carryover of beans next fall. Crushing is expected to be heavy through the year, which will result in big supplies of soybean meal.

While price forecasting in this field is extremely hazardous, it seems a reasonable conclusion that the price range for soybean meal during the balance of the crop year may be mostly in the $50 to $70 range as compared with about a $43 to $80 range in 1960-61.

Corn—Corn production this year is estimated at 3,549,000,000 bu., or 9% less than last year. The total supply available for 1961-62 will be about 5,548,000,000 bu., or only 2% less than was available last year.

The 1961 calendar year high for No. 2 yellow corn at Chicago was $1.19 bu., and the low was $1.04 bu. The 1962 range will probably be from 5 to 15 or 20% higher, with government selling policies being an important factor in determining both level and the timing of price moves.

Demand to Increase

As part of his discussion of trends, Mr. McNeal cited livestock and feed crop production trends in the east north central states (including Michigan) to show that there will continue to be a growing demand for purchased feeds in the area.

He showed how both livestock production and grain production have grown the past 20 years. And he said that with such a balanced situation between feed supplies and feed demand, there is not much chance that big commercial farming operations will be the predominant factor in the agricultural economy. Rather, it would indicate an increasing sized family farming operation, and this means there will continue to be a growing market for purchased feeds to provide a balanced ration.

Norman Peters Dies

MODESTO, CAL.—Norman Peters of the Milk Producers Assn. of Modesto, one of the large dairy feed manufacturers in the San Joaquin Valley, died recently. Mr. Peters was manager of the producers' service division.

Commercial Flock Has 1-for-2 Conversion

CONESTOGA, PA.—A commercial broiler grower has produced a flock of birds which averaged about 4 lb. with a feed conversion of less than 2 lb. of feed per pound of bird. The results were described as "the first breakthrough of a major growth and feed conversion goal set by the poultry industry for commercial broiler production."

The grower was Harold Miller of Conestoga, and the flock was 1,700 Hubbard Barred Silver Cross cockerels.

Mark Hess, contract production manager for the Pennsylvania Farm Bureau Cooperative Assn., who checked and verified the records, said that the less than 2-lb. feed conversion mark has been reached experimentally with small numbers of birds but that the Miller results were the first reported with a commercial flock.

The cockerels were grown for eight weeks. When they were sold and weighed, they averaged 4.01 lb., and feed conversion was shown to be 1.98

Mr. Miller, who hand-fed the birds throughout, marketed 1,680 of the 1,700 broilers started—about 99%.

Pfizer Unveils Animal Agriculture Film

CHICAGO—A public service film, "The Dynamics of Animal Agriculture," was premiered in Chicago Dec. 13 by the agricultural division of Chas. Pfizer & Co., Inc., New York.

More than 100 midwestern agricultural leaders from industry, government and the college research and extension work attended the presentation of the film at a luncheon at the Sheraton-Chicago Hotel.

The 16 mm. film, a full sound and color production running 26 minutes, deals with the vastness and strength of animal agriculture in the U.S., and directly relates the human and industrial as well as rural resources of the nation to the physical and economic well-being of the American people.

A premier showing of the film—which is planned to give Americans in all walks of life a colorful, exciting look at U.S. animal agriculture and how it affects them individually—also was held earlier in Washington.

This showing was attended by legislators, government officials and businessmen.

Commenting on the new film, J. J. Thompson, vice president of Pfizer and general manager of the agricultural division, remarked, "Many people in America today are unaware of the impact animal agriculture, a multi-billion dollar industry, has on the lives and daily pursuits of each and every one of us. This film tells of the many significant contributions this highly industrialized segment of our economy makes to our way of life."

Production

Two years in the making, "The Dynamics of Animal Agriculture" was a cooperative effort of farmers, farm groups and some 12 agri-industries who contributed their manpower and facilities in cooperating with Pfizer and the film producer, Star Information Films, Plainfield, N.J.

Footage for the new film was taken in 16 states, and some 20,000 miles of travel were involved in its production, according to Pfizer spokesmen.

"The remarkable ability of one man on the land to feed 28 other men and women and sustain their energies for other non-agricultural professions in America provides the background for the film's central theme," said company spokesmen in their summary of the new film.

The film highlights what animal agriculture means in a dynamic American society, namely (1) a source of high quality food supporting a high degree of productive work; (2) a catalyst for the progressive development of American industries and (3) a growing industrial giant, underlying a nation's strength through its release of more people from agriculture to do other jobs vital to the continued prosperity of the economy.

The new Pfizer film is the second in a series of public service productions on pertinent subjects in agriculture. The first was "Dynamic Careers Through Agriculture," a film describing how new techniques have revolutionized the nation's largest industry and how this change has created thousands of new opportunities for American youth.

Prints of "The Dynamics of Animal Agriculture" soon will be available on a free-loan basis from the Farm Film Foundation, Washington, D.C. The same film distributor is currently making the first "Careers" film available under the same arrangement.

CENTENNIAL RECOGNITION—Orville L. Freeman, secretary of agriculture, is pictured accepting a plaque in recognition of the centennial anniversary of the U.S. Department of Agriculture during a movie premiere at the Statler Hilton Hotel, Washington. Hugh O. Dermody, assistant general manager, agricultural division, Chas. Pfizer & Co., Inc., New York, made the presentation. Mr. Freeman and other USDA officials previewed Pfizer's movie, "The Dynamics of Animal Agriculture." The plaque dedicates the film to the centennial observance.

It was pointed out in the premier showing that the "dynamics of animal agriculture" mean that investment of millions of dollars in private and public research and greatly increased farm investment have brought tremendous gains in agricultural productivity and in the economical production of meat, milk and eggs, with consumer buying power in terms of meat per hour of labor up as much as 155% compared with 20 years ago.

Agriculture by 1970

Dr. Earl L. Butz, dean of agriculture, Purdue University, Lafayette, Ind., gave an address at the premier showing in which he said agricultural advancements in the 1960's will be even greater than they were in the 1950's.

"One worker on farms now feeds and clothes himself and 27 others," Dr. Butz said. "This ratio has trebled in the last generation. By 1970 fewer workers on our farms than now will be feeding 215 million Americans—30 million more than now."

Dr. Butz said that in 1970 "one farm worker will feed and clothe about 50 other people—better than ever before in history." He also said that "only about 7% of our total population will be members of farm families in 1970." This, he pointed out, contrasts with 10% now and over 25% a generation ago.

"By 1970, we'll have a fifth fewer farms than now, just as we now have about one fifth fewer than 10 years ago," he added.

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AFMA

(Continued from page 1)

Oakley M. Ray, the AFMA official testifying, said his appearance at the final session of a series of hearings scheduled by the U.S. Department of Agriculture was "to attempt to constructively and objectively point out some problem areas that need further analysis and consideration by the secretary of agriculture in all segments of the turkey industry."

AFMA members, he said, account for approximately 75% of the nation's total production of manufactured feed for livestock and poultry. "The feed industry is an important segment of the turkey industry," Mr. Ray testified from a prepared statement in behalf of AFMA. "As a service industry, our welfare is dependent upon a stable and prosperous livestock and poultry industry."

Points to Consider

The following points, the AFMA statement said, are among those which warrant further consideration:

"1. The proposed hatching egg marketing order would limit the supply of poults. Decreased supply and increased demand would cause poult costs to increase to a level which would likely offset much of the expected gain from higher turkey prices.

"2. If the hatching egg order is to be satisfactory to producers, we believe a formal or informal quota system must be developed for each turkey producer. Under such a system, hatcheries would be permitted to sell poults only to producers with a quota. Otherwise a hatchery would be faced with the task of deciding which of several producers would receive a limited supply of poults. If hatcheries are permitted to decide which producers will receive poults, the temptation will exist to sell to favorite customers and/or to grow out more of their own poults. This could easily mean some producers would be unable to obtain poults. Producers will not be willing for hatcheries to make such vital decisions.

"3. If hatching egg orders are used over a period of years, quality of poults is likely to deteriorate. It appears likely hatcheries would be able to sell their entire quota of poults almost regardless of quality, and that there would be little incentive to carry on programs required to maintain and improve quality.

Pounds, Not Numbers

"4. We believe that any turkey quotas which are developed should be in pounds instead of birds, since producers are likely to feed most turkeys to heavier weights when higher prices are in prospect.

"5. The proposed orders would encourage more farmers to market live and/or dressed turkeys direct to consumers in an attempt to circumvent the program. . . . Some turkey growers would also be encouraged to hatch their own poults.

"6. It appears that most of the supply control would have to take place at the hatchery or producer level, because the cost of set-aside turkey at the processor level would soon offset the gains that might be made from higher prices per pound for the remainder of the crop. . . . By the time storage and transportation costs of set-aside turkeys were deducted, the net amount received per pound would often be small. Thus, it appears likely that the cost of the processor set-aside would be so high that most of the production control must come at the producer or hatchery level if the producer is to benefit.

Costs of Program

"7. Some of the increase in consumer turkey prices would be required to cover the increased costs of the marketing order programs. . . .

"8. The advisability of granting a third federal agency authority to determine what constitutes unfair trade practices seems questionable. The department of agriculture does not specialize in this area, and both the Federal Trade Commission and the department of justice are already in this field.

"9. We believe that the proposed marketing orders should provide for a producer referendum each year so that producers would be guaranteed the opportunity to reject the marketing orders at any time they became unsatisfactory.

"10. If the marketing orders are approved, we recommend that the administrative committee and the secretary limit the supply control to modest adjustments. We believe there are several reasons why it is not in the best interest of the turkey industry to restrict supply to the point where turkey prices will be increased sharply."

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Marketing Orders Hottest Topic at APHF Conventions

KANSAS CITY — The American Poultry & Hatchery Federation has put the wraps on a series of three "Quickie" conventions, with marketing orders emerging as the hottest topic at all three.

Proposed turkey orders and possible broiler orders claimed the spotlight in private discussions as well as, more formally, in clinics on the subject held at each convention.

Poultrymen at all three gatherings expressed disappointment at the absence of Dr. James Ralph, assistant secretary, U.S. Department of Agriculture. Dr. Ralph had been scheduled to present information on marketing orders and to answer questions during the clinic sessions.

He reported having to cancel his appearance at the Las Vegas meeting Dec. 1-2 because of a conflict with another meeting; he was said to have missed a plane in Denver which would have taken him to the Kansas City convention, held Dec. 6-7, which was attended by more than 300 Midwest poultrymen. He then was called to Washington because of a family illness at the time of the New York convention, Dec. 8-9. The latter was attended by more than 100 poultrymen from 15 Seaboard states.

Don Turnbull, executive secretary, APHF, moderated a panel discussion on orders at the Kansas City meeting (Feedstuffs, Dec. 9, page 1). Dr. Linley Juers, staff economist, USDA, who was to have shared clinic duties with Dr. Ralph at the Eastern meeting, carried on alone. Richard Ammon, managing director, NEPPCO, and Ray Firestone, APHF president, posed questions to Dr. Juers.

Sentiment at the Midwestern "Quickie" was reported to be generally opposed to marketing orders, with the trade said to be fearful that orders would work to the advantage of the commercial egg and broiler interests, and that they would tend to "freeze" the Midwestern industry at its present small farm flock level.

Announce Sow's Milk Replacer for SPF Pigs

NEW YORK—A sow's milk replacer for specific pathogen free pigs has been announced by the feed supplement division of the Borden Special Products Co., New York.

Called "Borden's SPF-lac," the new product can be used in laboratories where SPF programs are being conducted, as well as for farm application for orphaned piglets or for litters of sows which don't have sufficient milk to feed their young, according to Richard G. Sanders, sales and marketing director for the division.

The milk replacer is for use during the isolation period in the lives of the SPF piglets. Mr. Sanders said SPF-lac is a sterile product, in liquid form, composed entirely of human-grade ingredients. The product is ready to use right from the can so that neither additional mixing nor further sterilization is required. It may be stored at room temperature, and is packed in 15½ oz. cans, 12 cans to a case.

Mr. Sanders said SPF-lac was developed at Borden's national research laboratory and test farm, Elgin, Ill., and was successfully tested by a leading university.

Under the SPF program, disease-free pigs are obtained from good breeding stock by hysterectomy, reared in isolation units and brooders until they are four weeks old, and then allowed to mature under normal rearing conditions on farms from which all other swine have been removed.

Broiler Egg Set Under Year Ago

SALISBURY, MD. — The 42,844,000 broiler eggs set in 22 important producing states last week amounted to a gain of 2% over the previous week, but 5% under the corresponding week a year earlier.

Settings were down from the previous week in 15 of the 22 states. States for which sizeable increases were reported include North Carolina, Pennsylvania, Maryland and Alabama.

Broiler chick placements in the 22 top states last week totaled 32,162,000. This was 8% above the previous week and 4% above the corresponding week a year earlier. States for which appreciable increases were reported included Maryland, Alabama and Georgia.

DELMARVA

(Continued from page 4)

the profits. The going price for chicks has been from 9 to 9½¢ lately. Under this share, contract hatcheries have received, in some cases, about 2¢ less than the going price.

The spokesman for this firm said he had not had difficulty getting chicks. Apparently there have been so many chicks available that hatcheries were willing to gamble on this extra business.

Under the share contract, the broiler grower has an opportunity to make more money than with other contracts when prices go higher.

Now concerning the hatcheries in Delmarva, how have they been making out? At least five of the large integrated broiler contractors have their own hatcheries. Most of the other independents have found a "home." They are tied in with broiler contractors with some kind of special deal. It is a matter of "scratching each other's back." For example, one firm is looking out for the economy of its hatcheries as long as feed from the contractor's mill is fed to laying flocks.

No large integrated broiler contractors have gone out of business. However, there have been a few contractors who have no facilities of their own (mill or hatchery) who have given up. Another contractor with a million birds on contract is closing its mill and merging with another milling firm.

How About the Grower?

Now what about the broiler grower? In general, broiler contracts have guaranteed $40, $50 and, in some cases, $60 per thousand. Good growers have weathered the storm in good shape. They have been so valuable to contractors that the contractors would do practically anything to keep them. For this reason the $60 guarantee still exists, even though the contractor has taken a beating.

Inefficient growers haven't done so well. Contractors have dropped them and there has been no other contractor who would take them. However, there are only a few of these around.

The price of broilers went up to 18¢ the other day. And that same day an advertisement asking for broiler growers appeared in the local paper. Maybe this contractor will put some of the inefficient growers back in business.

About the future, one industry spokesman said that the present good prices are wonderful, he just hopes they will continue. But looking at the future supply of eggs (according to the pullets tested to go into production) there will be an abundance of hatching eggs. And you know the results.

FEED MILL OPEN HOUSE

MINNESOTA LAKE, MINN.—The Minnesota Lake Farmers Co-op Elevator Assn. held open house at its new feed mill.

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Part 2—Ruminants

A Summary of Selected Papers Presented at the American Society of Animal Production Meetings

- Vitamin A
- Additives
- Protein
- Nitrates and Nitrites
- Physical Form of Ration
- Levels of Roughage
- Vitamin A and Thyroid
- Heat-Processed Rations
- Enzymes
- Minerals

By Dr. T. W. Perry
Purdue University

EDITOR'S NOTE: This is the second of two articles summarizing selected papers presented at the annual meetings of the American Society of Animal Production in Chicago. In this article, Dr. T. W. Perry, animal scientist at Purdue University, Lafayette, Ind., reviews and comments on papers dealing with ruminant nutrition research. Nutritionists and other feed men will find the review helpful in bringing themselves up to date on some of the latest livestock nutrition developments. Swine nutrition papers were reviewed in the Dec. 9 issue of Feedstuffs.

One of the largest groups in attendance at any of the sectional meetings of the two-day American Society of Animal Production meetings was the group which attended and participated in the sectional meeting devoted to vitamin A for ruminants—predominantly beef cattle. Vitamin A was the first vitamin to be discovered some fifty years ago and interest in it has been shelved for several decades due to the flurry to identify a whole host of other vitamins. However, too many field conditions plus isolated university experiment stations have hinted at typical vitamin A deficiency symptoms to let the subject of vitamin A lay idle any longer. During the past two years many university stations have re-opened the subject of vitamin A for beef cattle in order to re-establish vitamin A requirements as well as to determine what may be hindering the ability of fattening cattle to convert carotene to vitamin A.

20,000 UNITS OF A DAILY—Purdue research data was reported in which varying levels of supplemental vitamin A were fed to fattening beef steers in drylot. A ration commonly used in the Corn Belt was used to produce typical vitamin A deficiency symptoms; it consisted of ground ear corn and soybean oil meal. These two ingredients were mixed together in a ratio of 8 parts ground ear corn to 1 part of soybean oil meal, plus minerals. One half of the steers were fed 10% of sun cured alfalfa meal in place of 10% of corn cobs of the control ration. Steer calves fed the ration without alfalfa showed a highly significant increase in daily gain (1.82 lb. vs. 2.18 lb. per day) from a supplemental intake of 10,000 I.U. of vitamin A per day. Steers fed 20,000 I.U. showed no additional boost in gain over those fed 10,000 I.U. Higher levels of 30,000, 40,000 or 50,000 I.U. were without additional benefit over the 20,000 level. When sun cured alfalfa made up 10% of the ration, daily gain data indicated 10,000 I.U. level was optimum but the blood plasma picture, liver storage and daily feed consumption indicated 20,000 I.U. per day was the optimum figure.

Very definite vitamin A deficiency symptoms were manifested in those fed no supplemental vitamin A. Night blindness was observed when such cattle were driven in the early morning hours. Looseness in the shoulders, enlargement of the brisket and partial paralyzing of the hind quarters were observed in the deficient animals.

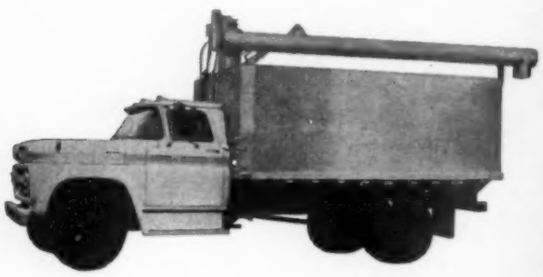
VITAMIN A EVERY DAY?—Kolari (Minnesota) investigated the possibility of "loading" up cattle with vitamin A to carry them over periods when supplemental vitamin A was not available. Three experiments were conducted in which 100,000 units of vitamin A was fed per head, daily, for five days, either at the start of the feedlot period or else both at the start and then again part way through the feeding period. No consistent benefit in terms of increased gain was shown by this method of administering vitamin A.

Comment—Perhaps even though cattle can store vitamin A for quite some time, a daily supply of the vitamin is needed for optimum performance.

NITRATES AND NITRITES INTERFERE—South Dakota research (Weichenthal) was designed to determine the effect of feeding 1% sodium nitrate to yearling beef steers. The feeding of sodium nitrate reduced feed consumption and weight gains, and this effect was apparently not alleviated by the feeding of soybean meal or vitamin A, or a combination of the two, along with the nitrate. Hale, however (Arizona), showed that the addition of 1% potassium nitrate tended to speed up the depletion of liver vitamin A of cattle fed a low carotene ration. A similar speed up in the depletion of liver vitamin A resulted from the feeding of a higher concentrate ration (71% TDN vs. 54% TDN). Both concentrate level and nitrate addition reduced feed intake.

Grainger (Monsanto) fed a vitamin A-free and carotene-free ration to yearling steers to determine factors which hastened the depletion of liver vitamin A stores. The steers reported on had been injected intramuscularly with 1 million units of vitamin A at the start of the trial. Increasing the dietary protein level (11% to 19%) or increasing the energy level of the ration hastened vitamin A depletion from the liver. However, the feeding of a small amount of the antioxidant Santoquin significantly reduced vitamin A liver loss.

ILLINOIS REPORTS ON NITRATES—Illinois workers presented three papers concerned with silages and with nitrates on animal perform-



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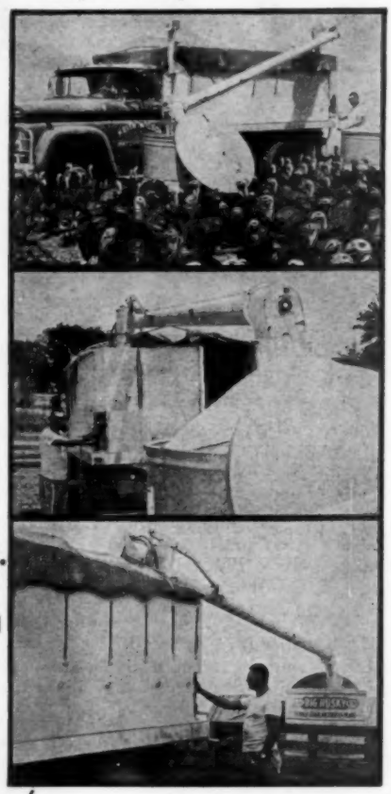

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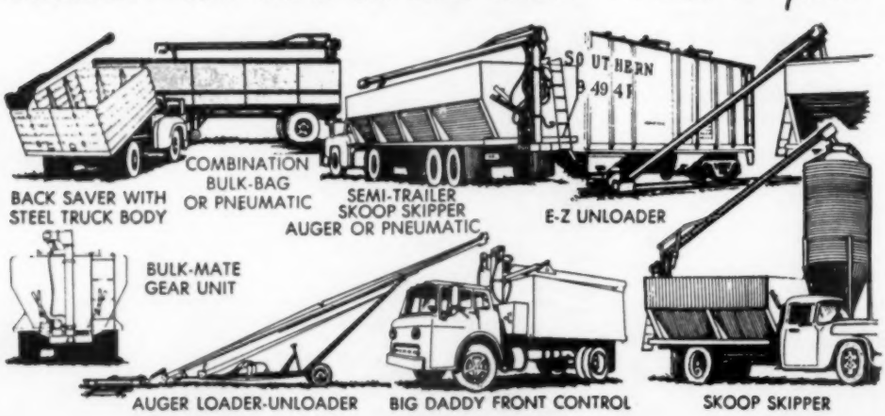

ance. Smith reported on silage feeding work in which various types of silages were fed. Cattle fed dwarf corn silage had over twice as much liver storage of vitamin A as those fed regular corn silage. His work showed that many typical rations that should contain "enough" carotene resulted in rather low stores of vitamin A. Jordan demonstrated that the level of nitrates in silages could be affected by the level of nitrogen fertilizer applied to the crops. Liver vitamin A levels after 88 days were lower in cattle fed the silage made from the more highly fertilized fields. However, Breniman showed there were a variety of factors which influenced the level of nitrates in the harvested crops. Of course, the level of fertilization affected level of nitrate in the plants, but such other factors as time of day, level of moisture and whether it was sunny or shady—level of nitrates was higher on a sunny day than on a shady day—also had their effect.

Comment—There appears to be some relationship between the level of nitrates present in feedstuffs and the ability of cattle to convert unusable carotene into usable vitamin A. This relationship is not too clear, but it seems to play quite an important part in vitamin A nutrition. Until the complex pattern is learned, nutritionists have little choice but to recommend the addition of approximately 20,000 I.U. of vitamin A per head daily to growing and fattening rations for beef cattle.

VITAMIN A AND THYROID?—Burroughs (Iowa) reported data which indicated a goitrogen, methimazole, was of benefit most in the absence of adequate vitamin A. In other words, when a ration low in vitamin A was fed, most growth response was obtained by the feeding of 15 to 20 mg. of methimazole per pound of ration—but only for a period of two or three months. When adequate levels of vitamin A were fed either no effect or negative effect was obtained from feeding methimazole. He also reported that the feeding of a small amount of thyroprotein (1 to 4 mg./lb.) appeared to enhance the effect of methimazole in a vitamin A deficient ration.

FEED ADDITIVES—The area of feed additives continues to be just as popular in beef cattle and sheep research as for swine. The lure that some additive—or group of additives—can provide the magic stimulus needed for consistently improved performance of meat animals continues to stimulate research scientists.

Jordan (Minnesota) reported results from investigating the antibiotic Virginiamycin for both feeder lambs and suckling lambs. The results of the first trial with feeder lambs resulted in significantly increased gains from either 18.5 or 37 mg. of the antibiotic per lamb daily. However, a replication of this research with another group of feeder lambs plus two trials with suckling lambs failed to show any benefit from the addition of Virginiamycin to the control ration.

Hormone implants of either thyroxine or testosterone, or both, were compared in wether lamb research reported by Hatch (Nebraska). Injection subcutaneously of either 5 mg. of sodium L-thyroxine or 25 mg. testosterone enanthate were the levels of the hormones studied. In a growth study trial neither of the hormones affected growth or feed efficiency. The same results were true when the two were combined. In digestion trial studies no consistent benefits were obtained from the treatments. Similarly, there was no relation between thyroid size and treatment.

Smith (Abbott) presented data from four experiments in which erythromycin thiocyanate or spray dried erythromycin spent broth was fed and the results were compared with those obtained from feeding agrozyme or chlortetracycline. Rather inconsistent results were obtained from the two products tested over the four feeding trials. However, in one experiment increases in gain were obtained by feeding 3.5, 7.0 or 14.0 gm. per day of the spray dried erythromycin spent broth to cattle that had been implanted with diethylstilbestrol. In another experiment the above additive was without effect.

The effect of implanted stilbestrol and fed chlortetracycline was investigated in research reported by Barrick (North Carolina). The average daily gain of diethylstilbestrol-implanted steers in five trials was 2.58 lb., representing a 22% increase. These trials were conducted with fattening steers self-fed corn containing 10% fat, on pasture. The effects of the use of diethylstilbestrol implants on carcass characteristics were not marked and were not consistent from trial to trial. In all trials, the use of chlortetracycline resulted in some increase in daily gain and a slightly higher degree of finish, as measured by such characteristics as marbling, grades and percent of fat in the rib section.

Ogilvie (Wisconsin) presented data which showed the carcasses from steers fed diethylstilbestrol contained more protein and water and less fat than carcasses from steers that did not receive the hormone. The use of the hormone had significantly increased the rate of gain of the animals checked. As another part of the study, the effect of a low protein (8.8%) was compared with that of a high protein ration (14.4%). Percent of protein had little effect on gain, but carcasses from the steers fed the low protein ration had more moisture and less fat than those fed the higher protein ration.

Kuhlman (Oklahoma) used as high as six 30 mg. implanted pellets of sodium-L-thyroxine in nursing beef cows to determine the effect on milk production and weight gains of calves nursing the cows. In one trial milk production of the implanted group increased 17% at two weeks after implantation while milk production in the control group had declined slightly. However, this advantage for the implanted group had disappeared at the next two check intervals. The implanted group showed less gains than the control during the first month, but from then on gains were similar. Calves nursing the implanted cows gained slightly more. When calves were implanted with thyroxine, an initial shock was indicated by depressed gains for a period after the treatment.

PROTEIN FOR BEEF CATTLE—Protein and energy relationship for beef cattle came in for its share of discussion. Zimmerman (Illinois) reported on studies in which two fairly close levels of energy (68 and 75% TDN) and two energy-protein ratios (5.9 and 7.2 TDN per pound crude protein) were compared. The energy level was changed by changing the ratio of corn silage and corn; the energy-protein ratio was varied by substituting soybean meal for shelled corn. Daily gains on the low energy-wide ratio and the high energy-wide

(Turn to RUMINANTS, page 88)

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Delmarva's Position in Broiler Industry Studied, Compared With Other Major Producing Areas

A report compiled and recently issued jointly by the University of Delaware and the University of Maryland provides an up-to-date analysis of the growth and progress of the broiler industry in Delmarva and how its present status and problems compare with those of other major broiler producing areas.

Conclusions drawn from the study indicate:

- The cost of transporting feed ingredients into Delmarva continues to place the area in an unfavorable position relative to other broiler areas. As a result, Delmarva's poultry industry has made major adjustments in feed ingredient sources. For example, much more corn is grown locally.
- Delmarva's cost of production is about 2½¢ lb. higher than the Southeast's. Some of this higher cost is offset, however, by being closer to metropolitan areas of great broiler consumption.
- There are many ways the Delmarva broiler industry can reduce its production costs.
- Delmarva generally produces a heavier broiler and sells it to the consumer at a higher price per pound than other major producing areas.
- Delmarva is unique in that it produces only a small share of the eggs from which the area's poultry industry hatches chicks.
- Delmarva has higher processing costs than other areas because of higher labor costs, higher overhead costs and slightly lower yields. But its plant efficiencies are generally higher on a basis of output per man hour.

Since 1959

These conclusions are only a few of the many appearing in the report, "Delmarva's Position in the Broiler Industry," based mostly on data supplied by hatcherymen, producers, feed manufacturers and broiler processors.

The study, which, for the most part, traces developments since 1959, when other extensive studies were completed, was conducted by the Delaware and Maryland universities in cooperation with Delmarva Poultry Industry, Inc. Research was coordinated by Dr. Harold Smith of the University of Maryland's department of agricultural economics, with Willard McAllister serving as coordinator for work done by University of Delaware researchers and Frank Gordy, executive secretary of DPI, serving as liaison with the industry.

Factors of concern which resulted in the 1961 study included: (1) Continued low broiler prices at all levels, (2) no apparent reduction in Delmarva freight rates, (3) further restriction in marketing area for Delmarva broilers, (4) further reductions in transportation rates in the South, (5) recent developments in the financial structure of the broiler industry as a whole and (6) recent considerations of mergers within the industry to gain advantage of larger volume production and marketing.

Summaries of Sections

Following are summaries of the major sections included in the Delmarva study (additional details on parts of the report will be presented later):

AREA COMPARISONS IN BROILER PRODUCTION, PRICE AND FEED RELATIONSHIPS—Delmarva feed manufacturers increased their volume of output per plant from 42,000 to 50,000 tons from 1959 to 1961 according to a University of Maryland study conducted by Dr. Harold Smith, Dr. Norman Helbacka, John Crothers and Dr. John Curtis. (See Table 1.)

Over this same period, feed manufacturers showed great improvement in utilization of operating capacity. The gain in this respect was from 87% in 1959 to 106% in 1961. Total production of 1,004,482 tons in 1961 represents a moderate increase compared with 1959. Tonnage per mill ranged from 8,000 to more than 150,000 tons on an annual basis. Smaller mills operated at a higher per cent of their 8-hour capacity than did larger mills.

It was found that Delmarva broiler growers receive a higher average return than those of other broiler areas. According to the Maryland study, 50% averaged between $60 and $70 per 1,000 birds grown in 1961.

Grower Contracts

Grower contracts were found to be very similar among feed manufacturers of the area. In general, the feed company furnished feed, fuel, litter, medicine, chicks, insurance and supervision, while growers furnished houses, equipment and labor. Supply variations were noted in some contracts where incentives were provided; and in a few cases electricity was supplied by the feed company.

The major portion of the ingredient price differential between areas compared in the study was due to freight rate differences. The average farm price of soybeans was 10¢ higher in 1960 than in 1958 in the Delaware-Maryland area. In Georgia, during the same period, prices of soybeans declined 15¢ bu. with no appreciable changes occurring in other states. The corn price for Delmarva was 9¢ bu. lower in 1960 and in Georgia it was 6¢ lower. Only slight declines in corn prices occurred in Alabama and North Carolina.

A new source of supply which developed since 1959, namely Norfolk, Va., now accounts for 59% of Delmarva's soybean oil meal utilization. The peninsula area received 24% from the Midwest and 17% from the local area.

Soybean production in Delaware and Maryland increased 48% from 1958 to 1960.

Delmarva also improved its corn production position. In 1958, it was reported that 56% of the corn required for the broiler industry was obtained from the local area. Today the figure is 80%. Only 5% of Delmarva's corn needs is obtained from the Midwest compared with 38% previously.

The Maryland study notes that Delmarva is better able to utilize locally produced ingredients by virtue of increased storage capacity. Almost 5 million bushels of storage capacity was added by farmers, storage firms and feed manufacturers from 1959 to 1961.

Maine and Delmarva produce a heavier bird and receive higher prices for them. In 1960, Maine broilers averaged 3.9 lb. and sold for 17.7¢ lb. Delmarva's average was a 3.7 lb. bird sold at 17.6¢ lb.

Lightest Bird

Arkansas and Virginia produced the lightest bird in 1960. Averages there were a 3.1 lb. bird sold for 16.3¢ and 16.7¢ lb., respectively. The trend toward producing a heavier bird has continued in all areas.

In 1960, Delmarva continued to rank second among the major areas in volume production, although 1958-60 expansion was relatively light. While production increases during the two-year period were approximately 35% in each of Mississippi, Arkansas and Alabama, the per cent increase in Delmarva was only 7.6%. (See Table 2.)

Most of the data for this section of the joint study was supplied by 20 Delmarva feed manufacturers.

HATCHERY AND CHICK COSTS—W. T. McAllister, University of Delaware extension marketing specialist, concludes in his 1961 report of hatchery and chick costs, "The Delmarva area is unique among the major broiler areas in that it does not produce a major portion of the hatching eggs

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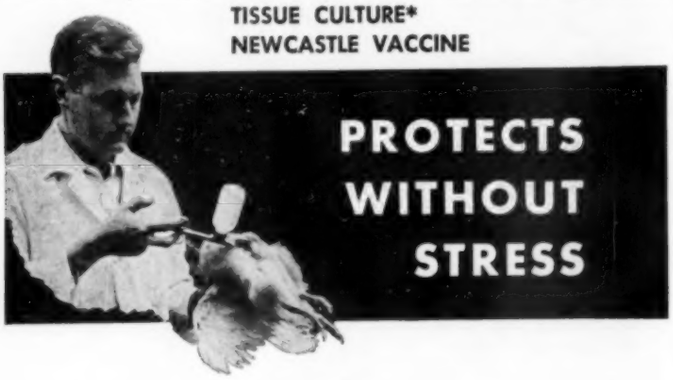

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TABLE 1. Milling Capacity, Output and Percent Operating Capacity, Feed Manufacturers, Delmarva, 1959-1961 Compared

Range milling capacity (tons)	—Number— firms		—Average volume— produced/plant (tons)		Per cent operating capacity‡	
	1959	1961	1959	1961	1959	1961
Over 25,000	15	10	56,823	80,278	93.7	103.9
Under 25,000	7	10	11,458	20,170	75.2	114.4
Total	22	20	42,389*	50,224†	87.3	105.9

*Feed manufacturers had a milling capacity ranging from 6,500 to 200,000 tons per year and output ranging from 4,550 to 150,000 tons per year. Manufacturers in the area produced nearly 1 million tons of feed in 1958.

†Feed manufacturers had a milling capacity ranging from 10,400 to 159,000 tons per year and output ranging from 8,000 to 156,000 tons per year. Manufacturers in the area produced a little over 1 million tons of feed in 1960.

‡Based on eight hours per day.

TABLE 2. Volume and Percentage Change in Broiler Production, Major Broiler Areas, 1958 to 1960

Broiler area	Volume produced 1958	Volume produced 1960	Actual change	Per cent change 1958 to 1960
	(thousand birds)			
Mississippi	85,424	115,900	30,476	35.7
Arkansas	133,331	180,397	47,066	35.3
Alabama	131,640	176,654	45,014	34.2
North Carolina	134,600	156,600	22,000	16.3
California	47,839	54,817	6,978	14.6
Georgia	292,119	320,250	28,131	9.6
Delmarva	180,459	194,155	13,696	7.6
Maine	56,475	54,148	—2,327	—4.1
Texas	114,855	105,203	—9,652	—8.4
Total	1,176,742	1,358,124	181,382	15.4

Source: Maryland-Delaware Crop Reporting Service, SRS, USDA.

used by hatcheries servicing the broiler industry of the area." He notes that approximately 37% of the eggs placed by local hatcheries are produced on the Delmarva Peninsula. Southern states are the major source of the remaining share.

Data for this section, which concerns the chick—"the second largest cash cost in the production of broilers"—was obtained largely through a questionnaire which was mailed to 34 hatcheries producing broiler chicks in Delmarva. Mr. McAllister's 1961 study complements a similar study conducted in 1959.

Mr. McAllister notes that a range of more than 12¢ doz. in the average price paid for hatching eggs in the first eight months of 1961 was reported by the 15 hatcheries replying to the questionnaire. The average monthly price for hatching eggs declined from 87.5¢ in January, 1961, to 66.1¢ in August, 1961.

"Low average hatchability appears to be a problem in some hatcheries," Mr. McAllister observes. "A range from a low of 70% to a high of 80% was reported. Each 1% improvement in hatchability is equal to $1,000 added return per million chicks hatched. On an area basis a 1% improvement in hatchability is equal to about $250,000 annual saving."

He cites as opportunities for hatcheries to reduce costs and improve their economic position: "(1) Improve operating efficiency of the hatchery, (2) improve hatchability

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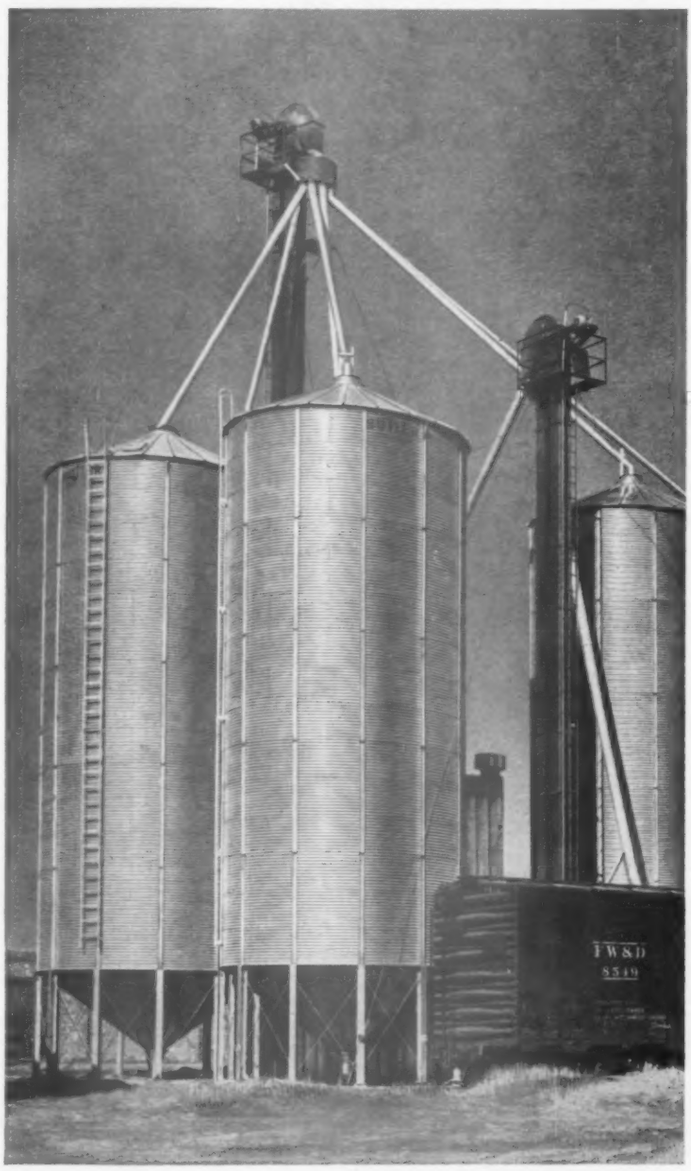

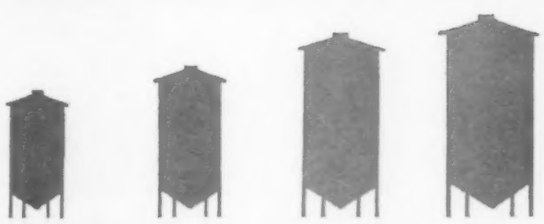

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and (3) determine sources of hatching eggs and procurement methods which result in lowest costs without sacrificing quality and performance."

The survey disclosed that four of nine hatcheries that now purchase eggs from out-of-area suppliers would be producing an increasing quantity of their requirements on the peninsula in future years.

COST OF BROILER PRODUCTION—This section of the broiler survey by Ray Lloyd, Frank D'Armi and W. T. McAllister, University of Delaware researchers, is divided into four parts: (1) The 1961 cost of production situation, (2) the relative position of Delmarva with other areas, (3) progress made since 1959 and (4) how cost of production can be reduced.

The following are specific suggestions made by the researchers on how broiler production costs can be cut:

1. Analyze grower records and eliminate the growers that continually have poor results.

2. Provide more in-service training for servicemen so that they are thoroughly familiar with the proven best management practices and are trained in the techniques of getting growers to adopt these recommended practices.

3. Since feed makes up 61% of the total cost of production, every effort should be made to reduce feed wastage.

4. Mortality must be reduced and medication costs reduced through better sanitation practices and improved medication procedures, particularly vaccination.

5. Reduce fuel costs by either changing from gas to other kinds of fuel or by supplementing the gas with other forms of heat, by winterizing houses, and by training servicemen and growers in brooder stove maintenance and operation.

6. Give some consideration to insulation of houses and the installation of fans for ventilation.

7. Use low light intensity in lighting houses.

8. Discontinue hatching from small size eggs.

9. Change contract arrangement from one of fixed guaranteed payment to one of incentives based on performance with a low minimum base guarantee. Provide a chance for the grower to be paid for accomplishment and initiative.

Summary

In summary, the authors stated:

1. In a survey covering a period of nine months and including 241 flocks and a total of 3,054,200 broilers started, it was found that: (a) The average cost of production was 17.95¢ lb. with 1.21¢ more for producing winter flocks than summer; (b) the average flock weighed 3.83 at 10 weeks of age with a feed conversion of 2.44 lb. and a mortality of 3.67%, and (c) there is a wide difference in production costs between producers with above average ability and those with below average ability. When flocks included in the study were divided into these two groups, the average difference between the above average grower and the less efficient producer was 1.88¢ lb. (See Table 3.)

2. Feed cost makes up 61% of the cost of growing broilers. Of the average total cost of 17.95¢ lb. to produce

(Turn to **BROILER**, page 92)

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USDA Gives Advice On Feeding Beef Cows During Feed Shortage

WASHINGTON — Cattlemen who cannot give their beef cows sufficient feed during periods of drouth-caused shortages, for instance—should underfeed pregnant cows and furnish adequate feed to those nursing calves, say U.S. Department of Agriculture scientists.

A recent USDA-Nebraska experiment shows that a group of pregnant cows fed an inadequate ration will produce light-weight offspring, but they will have as many calves the following year (when feed may be plentiful) as cows fed adequate diets during pregnancy and lactation.

The study was done at Ft. Robinson, Neb., by animal husbandmen J. N. Wiltbank, J. E. Ingalls and K. E. Gregory of USDA's agricultural research service, and W. W. Rowden and Dr. R. M. Koch of the Nebraska agricultural experiment station.

The researchers underfed a group of six-year-old cows, starting shortly after each animal weaned its offspring. The animals were fed 4.5 lb. of total digestible nutrients (TDN) per day until they calved again. Then for about three months, each cow received 16 lb. TDN.

For comparison, a similar group was fed nine lb. TDN daily until they calved, then 16 lb.—amounts considered adequate by the National Research Council. A pound of TDN can be supplied by about 2 lb. of good alfalfa hay.

Calves from cows underfed during pregnancy weighed less than those from cows fed adequate rations, but all the underfed cows conceived when bred after calving. These animals were later coming into heat, however, than those fed adequate diets. Nine weeks was the average time between calving and heat for cows underfed during pregnancy, compared with six weeks for cows fed adequate diets.

The costly after-effects of underfeeding throughout pregnancy and lactation were demonstrated in another group of cows in the Nebraska tests. These cows received 4.5 lb. TDN before calving, 8 lb. after. Very few of them were able to conceive. Most of the cows failed to come in heat within three months after calving; half of those that came in heat did not conceive when bred.

TURKEY TRUCK ROLLS

HONEYVILLE, UTAH — A truck transporting 720 turkeys rolled over on Highway 69 near this northern Utah community when its wheel hit a shoulder and it spun out of control. Driver Galen Rickets, 23, was not injured. A number of turkeys were killed. The remainder were herded against a fence until another truck arrived so that their journey could be continued.

Nulaid to Operate Egg Breaking Plant

SAN LEANDRO, CAL.—Soon 60,000 doz. eggs will be handled daily in a new breaking plant which will be operated by the egg products division of Nulaid Farmers Assn., San Leandro.

Nulaid News reports that the 80,000 lb. of liquid yolks, whites or whole eggs processed daily will either be distributed fresh in tank trucks, frozen by blast freezers or pumped into a huge dryer which can dehydrate all of the 80,000 lb. in 24 hours.

Nulaid developed an egg products division, officials say, because "California has become a surplus egg producing area" and "it became inevitable that someone had to set up the machinery for converting part of this surplus into egg products that can be marketed readily or stored practically."

Work Together

NFA officials note that the new egg products division, in conjunction with the association's fresh egg marketing program, "assures the producer of getting the maximum for his product despite shell egg market fluctuations."

". . . Suppose that eggs are in surplus with an increasing build-up of a shell egg inventory. A sharp price drop would probably be necessary to move the surplus. Now, with Nulaid's egg breaking facilities, a good portion of surplus eggs can be converted for breakout purposes. Personnel normally needed to candle eggs can also work in the breaking plant. Also, stocks of eggs can be stored frozen. When eggs are in short supply, the breaking plant operates with reduced volume.

"This interchange makes possible the diverting of eggs through different outlets to market conditions. It means greater stability to the market since the eggs will be put to the best possible usage through a coordinated marketing effort. . . ."

Breaking Was Sideline

Until recently, Nulaid notes, egg breaking in California was "a sideline activity . . . simply a salvage operation incidental to table egg packaging and considered insignificant. Inasmuch as California had no surplus, it imported almost all of its good frozen egg requirements from Nebraska, Iowa, Minnesota, etc. Indeed, several years ago a USDA breaking plant here would have been impractical what with a higher shell egg market and higher labor cost."

Convert Waste to Feed

BLACKFOOT, IDAHO — Ground was broken for the American Potato Co.'s waste treatment plant at its potato processing plant here.

The waste which will be removed in the process will be converted into cattle feed and sold for that purpose, it was reported.

Roy Roberts, general manager of the processing plant, said cost of the construction installation and equipping the facility will approach the $100,000 figure.

The contract calls for the construction of a 50-ft.-diameter clarifier and of a vacuum-belt filter to process the waste now being discharged into the Snake River.

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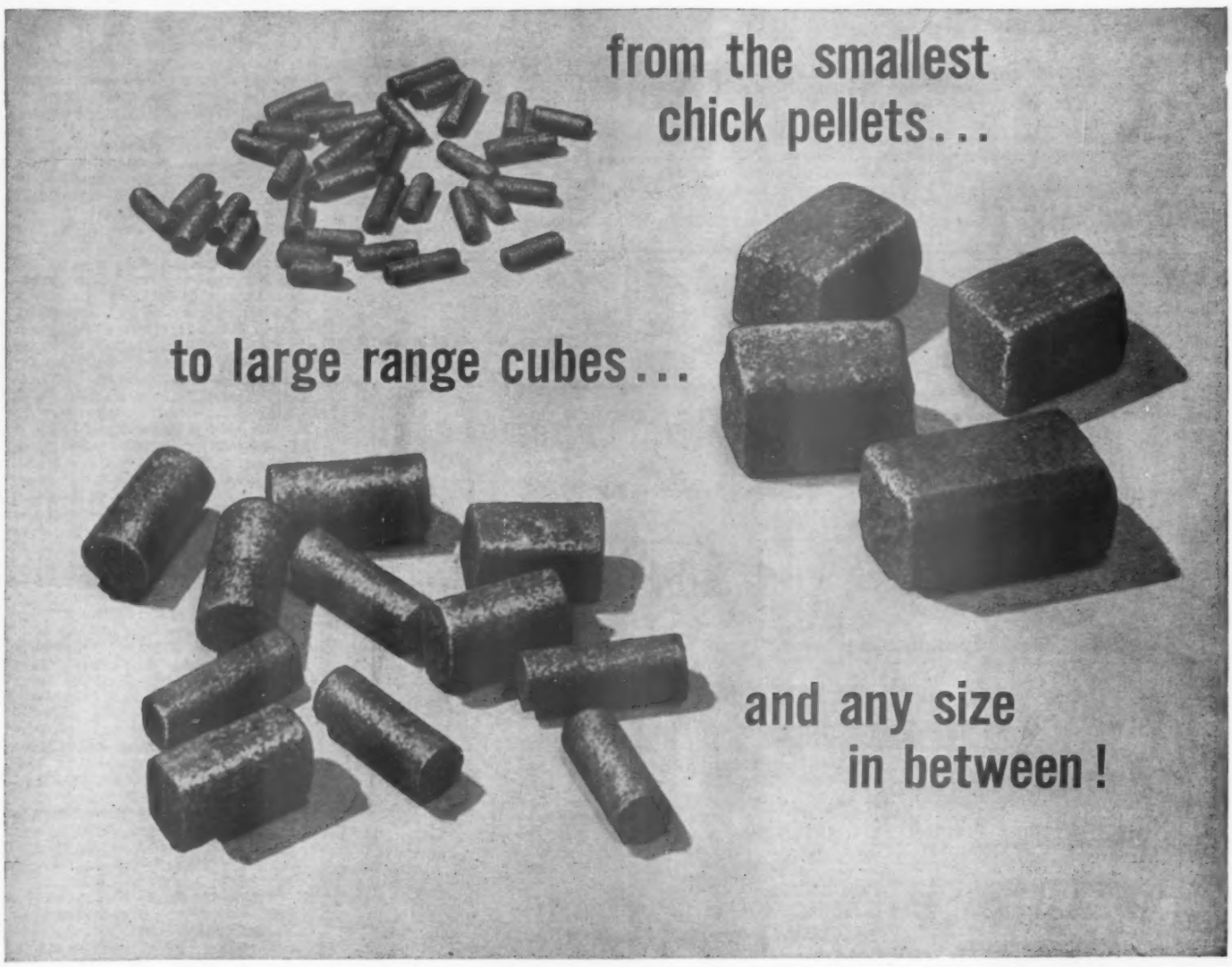

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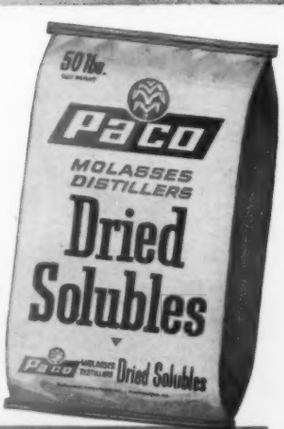

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Convention Calendar

Jan. 4-5—Minnesota Poultry Hatchery Assn.; Radisson Hotel, Minneapolis, Minn.; sec., L. L. Baumgartner, Litchfield, Minn.

Jan. 8-9 — Kansas Formula Feed Conference; Kansas State University, Manhattan; chm., Prof. T. B. Avery, Poultry Science Dept., West Waters Hall.

Jan. 9-11—National Turkey Federation; Memorial Auditorium, Dallas, Texas; co-headquarters hotels, Baker and Adolphus; sec., M. C. Small, Box 69, Mount Morris, Ill.

Jan. 16—Missouri Turkey Day; University of Missouri, Columbia; sec., Missouri Poultry Improvement Assn., E. M. Funk, Box 568, Columbia.

Jan. 19-20—Florida State Poultry Producers Assn.; San Juan Hotel, Orlando; sec., Tom Chesnutt, P.O. Box 11236, St. Petersburg 33, Fla.

Jan. 21-23—Indiana Grain & Feed Dealers Assn.; Claypool Hotel, Indianapolis; sec., Fred K. Sale, 600 Board of Trade Bldg., Indianapolis 4.

Jan. 21-24—Farmers Grain Dealers Association of North Dakota; Civic Memorial Auditorium, Fargo; sec., Lloyd C. Hanson, 513 Black Bldg., Fargo.

Jan. 22—Nevada Feed Confeernce; University of Nevada, Reno.

Jan. 23-27—New Jersey Farmers Week and Farm Show (Jan. 23-25); Trenton Armory; sec., Phillip Alampi, New Jersey Department of Agriculture, Trenton 25.

Jan. 28-30—Midwest Feed Manufacturers Assn.; Shamrock - Hilton Hotel, Houston, Texas; exec. vice pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City, Mo.

Jan. 29-31 — Southeastern Poultry & Egg Assn.; Merchandise Mart, Atlanta, Ga.; sec., Robert H. Martin, 235 E. Ponce de Leon Ave., Decatur, Ga.

Jan. 30-31—Illinois Agricultural Industries Forum; University of Illinois, Urbana, Ill.

Jan. 31—Louisiana Livestock Producers Day; Louisiana State University, Baton Rouge 3; chm., Dr. A. M. Mullins, Animal Industry Dept.

Jan. 31—Beef Cattle Study Day; Agricultural Experiment Station, University of Arkansas, Fayetteville; Dr. E. M. Cralley, station director.

Jan. 31-Feb. 1 — Illinois Nutrition Conference; University of Illinois, Urbana; chm., Dr. Carl L. Davis, Dairy Science Dept.

Jan. 31 - Feb. 1 — New Hampshire Poultry Health Conference; University of New Hampshire, Durham; Richard Warren, Poultry Science Dept.

Feb. 1—Boston Grain & Flour Exchange Annual Banquet; Parker House, Boston; tickets, Raymond C. Hall, H. K. Webster Company, 177 Milk Street, Boston, Mass.

Feb. 1-2—Oregon Animal Industry Conference; Oregon State University, Corvallis, Ore.; co-sponsored by the Oregon Feed & Seed Dealers Assn. and Oregon State University; chm., Bill Eggimann, Dairy Cooperative Assn., 2613 S.E. 8th Ave., Portland.

Feb. 2-3—Minnesota Turkey Growers Assn.; Leamington Hotel, Minneapolis; sec., Roy C. Munson, 2200 University Ave., St. Paul 14, Minn.
E. M. Funk, Box 568, Columbia.

Feb. 4-6—Wyoming Grain, Feed & Seed Dealers Assn.; Townsend Hotel, Casper, Wyo.; sec., Everett L. Berry, Box 118, Sheridan, Wyo.

Feb. 5-7—Association of Southern Agricultural Workers; Jacksonville, Fla.

Feb. 6-7 — Hoosier Turkey Trot; Memorial Union, Indiana University, Bloomington; Turkey Dept., Indiana State Poultry Assn., Inc., Poultry Science Bldg., Purdue University, Lafayette, Ind.

Feb. 7-9 — American Dehydrators Assn.; Stardust Hotel, Las Vegas, Nev.; Joseph Chrisman, 430 Board of Trade Bldg., Kansas City 5, Mo.

Feb. 9-11 — Poultry Fact Finding Conference; sponsored by Institute of American Poultry Industries; Municipal Auditorium, Kansas City, Mo.; pres., Harold M. Williams, 67 E. Madison, Chicago 2, Ill.

Feb. 12 - 13 — Montana Nutrition Conference; Montana State College, Bozeman; chm., Dr. O. O. Thomas, Animal Industry and Range Management Dept.

Feb. 14-15—Pacific Northwest Feed Mill Production School; Benjamin Franklin Hotel, Seattle; sponsored by Washington State Feed Assn.; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4.

Feb. 15-16 — Utah Feed Manufacturers & Dealers Assn. Annual Nutrition Conference and Meeting; The Newhouse Hotel, Salt Lake City; sec., Dr. Lawrence Morris, Brigham Young University, Provo.

Feb. 16 — Washington State Feed Assn. annual convention; Benjamin Franklin Hotel, Seattle; mgr., John

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A: No. Sun-cured hay varies widely and unpredictably in vitamin D content—80 units to 1,250 units per pound have been reported for sun-cured alfalfa hay. Two to five pounds of lower potency hay would provide about 200 to 500 units per cow per day which is insignificant. Even though the hay happened to be high in vitamin D, there would be only a modest contribution made toward the suggested optimum intake of 6,000 to 8,000 units per pound of dairy ration.

Q: How can I check to make sure my dairy cows are receiving enough vitamin D?

A: Good safeguards can be taken but an absolute check is probably not possible. Optimum vitamin D levels for top performance and longevity have not been clearly established but work is in progress. Mild deficiencies are often difficult or impossible to detect but they can be costly. Available information suggests the use of 6,000 to 8,000 units of vitamin D per pound of complete grain ration. Confidence in your feed manufacturer and the good performance of his well-formulated rations would be important for users of commercial feeds.

Q: Is there any danger of my feeds having too much vitamin D?

A: Our recommendations for the vitamin D fortification of feeds are well within the generally recognized safe limits of vitamin D intake for the different species of animals. With careful methods and efficient modern mixing equipment feed manufacturers are able to achieve good distribution of micro-ingredients. The chance of overdosage is remote.

Q: How much vitamin D do baby pigs and growing-finishing pigs need?

A: Early weaning, fast growth, confinement raising, multiple farrowing and other changes have greatly increased nutritional stress factors since the vitamin D requirements of pigs have been carefully studied. Based largely on amounts that have given good results in experimental and practical swine raising programs, a number of Experiment Stations are suggesting about 500 units of vitamin D per pound of milk replacer and starter with somewhat smaller amounts as pigs approach market weight.

Q: Do sheep get enough vitamin D from natural sources?

A: Not always. For instance, in recent English studies lambs from ewes given supplemental vitamin D averaged 6 pounds heavier at weaning in one flock and 9 pounds heavier in another than lambs from ewes given no vitamin D. Fleeces from experimental animals were more than ¼ pound heavier, graded higher, and brought a premium price.

D. C. Wallis

For more complete answers to any of these questions write to Dr. G. C. Wallis, Director of Nutrition, Agricultural Department, Standard Brands Incorporated, 625 Madison Avenue, New York 22, N. Y.

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Feb. 18-20 — Ohio Grain & Feed Dealers Assn.; Commodore Perry Hotel, Toledo; sec., George G. Greenleaf, P.O. Box 151, Worthington.

Feb. 20 - 21 — Virginia State Feed Convention and Nutrition Conference; Hotel Roanoke, Roanoke, Va.; sec., Virginia State Feed Assn., J. Paul Williams, 615 E. Franklin St., Richmond 19, or Prof. Paul M. Reaves, Dairy Science Dept., Virginia Polytechnic Institute, Blacksburg.

Feb. 23—National Feeder Finance Credit Group; Curtis Hotel, Minneapolis, Minn.; sec., R. Lindholm, 502 Thorpe Building, Mpls. 2.

Feb. 26 - March 1 — Colorado Livestock Days; Colorado State University, Fort Collins; chm., Dr. C. D. Story, head, Animal Science Dept.

March 2-3—Oklahoma Feed Industry Conference and Work Shop; Oklahoma State University, Stillwater; Dr. Rollin H. Thayer, chm., Poultry Science Dept.

March 4-6—Nebraska Grain & Feed Dealers Assn.; The Cornhusker Hotel, Lincoln; sec., Howard W. Elm, Terminal Bldg., Lincoln 8, Neb.

March 8 - 9 — Maryland Nutrition Conference; Shoreham Hotel, Washington, D.C.; chm., Dr. R. D. Creek, Poultry Dept., University of Maryland, College Park.

March 13—Illinois Swine Growers Day; Univerity of Illinois, Urbana, Ill.

March 15-16—Oregon Feed & Seed Dealers Assn.; Sheraton Hotel, Portland; sec., Russ Hays, Lewis Bldg., Portland 4.

March 15-17 — Pacific Dairy and Poultry Assn.; Biltmore Hotel, Los Angeles, Cal.; sec., Lloyd J. Powers, 1304 E. 7th St., Los Angeles 21.

March 19-21—Poultry and Egg National Board; Palmer House, Chicago, Ill.; mgr., Lloyd H. Geil, 8 S. Michigan Ave., Chicago 3.

March 21-23—Grain & Feed Dealers National Assn.; Denver - Hilton Hotel, Denver, Colo.; Secretaries Circle meetings March 19-20; sec., Herbert L. Sharp, 401 Folger Bldg., 725 15th St. N.W., Washington, D.C.

March 25 - 30 — Grain Elevator & Processing Superintendents; Town House Motel, Omaha, Neb.; sec., Dean M. Clark, 1115 Board of Trade Bldg., Chicago 4, Ill.

March 28—Distillers Feed Conference; Sheraton Gibson Hotel, Cincinnati, Ohio; Dr. Lawrence E. Carpenter, Executive Director, Distillers Feed Research Council, 1232 Enquirer Bldg., Cincinnati 2.

March 28—Commercial Egg Clinic; Texas A&M College, College Station; B. C. Wormeli, Extension Poultry Husbandman.

April 5—Purdue Egg Day; Purdue University, Lafayette, Ind.; chm., David D. Jackson, Poultry Science Dept.

April 9-10 — National Institute of Animal Agriculture; Purdue University, Lafayette, Ind.; sec., Karl D. Butler, P.O. Box 521, First National Bank Bldg., Ithaca, N.Y.

April 10-13—Animal Health Institute; Statler-Hilton Hotel, Washington, D.C.; sec., D. L. Bruner, 512 Shops Bldg., Des Moines 9, Iowa.

April 13 — Illinois Cattle Feeders Day; University of Illinois, Urbana.

April 18—Nebraska Feeders Day; University of Nebraska, Lincoln; chm., Dr. Robert M. Koch, Animal Husbandry Dept.

April 26-28 — Texas Grain & Feed Assn.; Hotel Texas, Ft. Worth; sec., R. B. Bowden, 504 Ft. Worth Club Bldg., Ft. Worth 2.

April 26-28—California Hay, Grain & Feed Dealers Assn.; Biltmore Hotel, Los Angeles, Cal.; sec., Leo L. Johnson, 1400 10th St., Sacramento 14, Cal.

April 26-28—Kansas Grain & Feed Dealers Assn.; Broadview Hotel, Wichita, Kansas; sec., Orris E. Case, 609 Wiley Bldg., Hutchinson, Kansas.

April 27 — Indiana Cattle Feeders Day; Purdue University, Lafayette; chm., Dr. W. M. Beeson, Animal Science Dept.

May 4 - 5 — Illinois Grain Dealers Assn.; St. Nicholas Hotel, Springfield, Ill.; exec. sec., Donald E. Palmer, 910 Lehmann Bldg., Peoria, Ill.

May 7-9—Association of American Feed Control Officials; Sheraton-Blackstone Hotel, Chicago, Ill.; sec., Bruce Poundstone, Agricultural Experiment Station Bldg., University of Kentucky, Lexington.

May 10-11 — Alabama Poultry Industry Assn. Convention and Poultry Jubilee; Dinkler - Tutwiler Hotel, Birmingham, Ala.; sec., W. L. Walsh, Box 567, Montgomery.

May 10-13—American Feed Manu-

(Turn to page 24)

CALENDAR FOR 1961-62

DECEMBER

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ROLLED OATS

GROUND OAT GROATS
FEEDING OATMEAL FLOUR
PULVERIZED WHITE OATS
PULVERIZED FEED OATS
HY-QUALITY OATMILL FEED
REGROUND OAT FEED
COARSE GROUND OATS

WERTZ FEED PRODUCTS
SIOUX CITY, IOWA
Phone 20545

CYANAMID HELPS YOU PROMOTE A PLANNED PROFIT PROGRAM FOR RANGE OPERATORS

...a planned program that calls for fortified range supplements for all over-wintering cattle and sheep. Cyanamid advertising, urging such a program, is now appearing in all the principal range areas.

BETTER YOUR CHANCES FOR A BIGGER CALF CROP WITH AUREOMYCIN!

This powerful antibiotic, in range cubes and protein blocks, protects pregnant cows, helps all over-wintering cattle fight off stress and disease

This is an old-time theory that has long since been exploded: You feed supplements to wintering cattle *only* when grass or hay is in short supply—and then only enough to *hold over* cattle.

Today, successful range operators do more than just "maintain" wintering cattle. *Planned* money-making with fortified range supplements fed regularly is a basic part of their range programs.

These operators have learned that even better returns can be made when these fortified supplements contain AUREOMYCIN®. No other antibiotic, drug, hormone or chemobiotic equals AUREOMYCIN in its power to control a wide range of diseases. With AUREOMYCIN in range supplements, cattle resist stresses, fight off infections, and come through in top condition.

Here's how AUREOMYCIN fits in your planned profit program:

1. Feed your cows a range supplement with AUREOMYCIN. Cows stay healthier, drop stronger, sturdier calves. You better your chances of a bigger calf crop.

2. Feed your over-wintering calves a supplement with AUREOMYCIN. Calves resist stresses, stay healthier and put on more growth per dollars invested.

3. Feed your replacement heifers a supplement with AUREOMYCIN. Heifers develop soundly and come into their yearling summer in healthy, vigorous condition.

Ask your feed manufacturer or feed dealer for range supplements containing AUREOMYCIN. Feed for extra returns. American Cyanamid Company, Agricultural Division, Princeton, N. J. *®AUREOMYCIN is American Cyanamid Company's trademark for chlortetracycline.*

More and stronger calves...that's th real pay-off in a cow-calf operation AUREOMYCIN helps you get them.

Range cubes with AUREOMYCIN ke these wintering calves putting healthy, profitable growth.

The label instructions on products, and on products Cyanamid ingredients, are th years of research and have be by Federal and/or State Go Always read the labels and co their directions for use.

VALUE OF AUREOMYCIN IN WINTERING RATIONS OF CALVES
(Combined results of 3 trials of 122 days each)

	Without AUREOMYCIN	With AUREOMYCIN	Difference
Number of calves	30	30	
Av. initial wt. (lb.)	495	495	
Av. final wt. (lb.)	676	695	19 lb.
Av. daily gain (lb.)	1.48	1.64	11%
	26.5	23.5	–11%
		$15.58	–$1.47

Cattle and sheep raisers from Texas to the Pacific Northwest will be *seeing* and *reading* these two advertisements during the winter months.

Each advertisement features a *three-step* feeding program *planned* for profits on over-wintering animals. Each advertisement promotes the use of fortified supplements containing AUREOMYCIN® as the one effective way to reduce stress, keep animals healthy and productive, bring in more dollar returns.

In addition to this farm paper advertising, 12 Radio Farm Directors on stations in the range areas will be telling your customers 3 times a week about the benefits of feeds containing AUREOMYCIN for over-wintering cattle and sheep.

Many feed manufacturers are already formulating feeds for planned profit programs—and showing their cattle and sheep producers how it pays to do more than just "maintain" wintering animals.

If you are not now recommending programs like these, plan to do so. Let your customers get the full advantages of AUREOMYCIN! Get in touch with your Cyanamid representative who will be glad to help you work out a program. He can also tell you the station and times for the AUREOMYCIN network programs. American Cyanamid Company, Agricultural Division, Princeton, N. J. ®*AUREOMYCIN is American Cyanamid Company's trademark for chlortetracycline.*

CYANAMID
AUREOMYCIN
IN FORMULA FEEDS

CYANAMID SERVES THE MAN WHO MAKES A BUSINESS OF AGRICULTURE

anamid
taining
result of
accepted
rnments.
fully fol-

BETTER YOUR CHANCES FOR A BIGGER LAMB CROP WITH AUREOMYCIN!

This disease-fighting antibiotic, in salt or pelleted supplements, protects pregnant ewes, keeps your entire winter herd thriving

Two factors largely determine the success or failure of a range-sheep operation. Every sheep rancher knows what they are: *productivity* of ewes, and *survival* of lambs.

Winter stresses can tip profits from these factors either way. *Downward*, if disease follows stress and gets out of control. *Upward*, if *you* offset stress by taking effective health-protection measures.

What are effective measures? Here's a three-way feeding program which many successful sheep raisers *put into practice and follow* in order to keep *out* disease and bring *in* extra returns.

1. *Save ewes, prevent vibriosis.* Feed a salt supplement containing AUREOMYCIN® to keep ewes healthy, lambing more easily, producing a bigger lamb crop. AUREOMYCIN helps prevent vibrionic abortions (see table below), keeps ewes strong, reduces ewes and lambs on a salt supplement containing AUREOMYCIN. This keeps ewes healthy, better able to support their lambs. It also guards the health of lambs and increases their gains.

3. *Creep feed AUREOMYCIN to get low-cost gains, prevent enterotoxemia.* You should creep feed early and continue until lambs are past weaning. AUREOMYCIN protects lambs when they are most vulnerable, guards against scours and enterotoxemia (over-eating disease). It increases gains up to 20%, improves feed efficiency up to 10%.

Ask your feed dealer or feed manufacturer for range supplements containing AUREOMYCIN. Feed to breeding herd for *productivity*—to lambs for more *survivals*, more market lambs, more returns! American Cyanamid Company, Agricultural Division, Princeton, N. J. ®*AUREOMYCIN is American Cyanamid Company's trademark for chlor-*

1,885,000 readers see and read Cyanamid advertising promoting range supplements—in these farm magazines:

FARMER STOCKMAN
NEBRASKA FARMER
DAKOTA FARMER
MONTANA FARMER STOCKMAN
COLORADO RANCHER & FARMER
OREGON FARMER
IDAHO FARMER
NEW MEXICO FARMER
WASHINGTON FARMER
WYOMING STOCKMAN-FARMER
ARIZONA FARMER RANCHMAN
UTAH FARMER

POULTRY SERVICE SCHOOL—Latest findings in management and disease prevention programs were covered in a recent two-day Honegger Farms Co., Inc., poultry service school at Forrest, Ill. Special emphasis was on laboratory and field work. Those who attended are pictured here, left to right: Robert Grogean, Warner Chick Sales, Union, Ohio; Dale Steffen, Honegger Farms, Forrest; Burnell Warner, Warner Chick Sales; Bernard Wolfe, Warner; Roy Guffey, St. Elmo Grain, Feed & Hatchery, St. Elmo, Ill.; Harold Schimmel, Barker Electric Hatchery, Frankfort, Ind.; Harold Lauterbach, Jacobson Grain Co., Rowe, Ill.; Wayne Steffen, Honegger Farms, Fairbury, Ill.; Ed Jarmer, Pioneer Poultry Farm, Zeeland, Mich.; James Ripp, Sunnyside Hatchery, Madison, Wis.; Glen Gullakson, Marlowe Feed & Hatchery, Huntley, Ill.; Kenneth Cummins, Sunland Hatchery, Newton, Ill.; Howard Zehr, Honegger Associate Store, Gridley, Ill., and Andy Dennie, Inwood Feed & Grain, Inwood, Ind.

facturers Assn.; Conrad Hilton Hotel, Chicago, Ill.; sec., W. T. Diamond, 53 W. Jackson Blvd., Chicago 54.

May 27-28—Missouri Grain & Feed Assn.; Hotel Governor, Jefferson City, Mo.; sec., D. A. Meinershagen, Higginsville, Mo.

June 8 — Poultry Coronation Banquet; Dinkler Plaza Hotel, Atlanta, Ga.; sec., Abit Massey, Georgia Poultry Federation, Box 493, Gainesville.

June 28-30—Canadian Feed Manufacturers National Assn.; Sheraton Brock Hotel, Niagara Falls, Ontario, Canada; contact, Gary E. Young, 554 Lakeshore Blvd. East, Toronto 2.

July 13-17—Georgia Feed Assn.; Tides Hotel, St. Petersburg, Fla.; sec., Will L. Kinard, Suite 210-3240 Peachtree Rd. Bldg., Atlanta 5, Ga.

July 17-19—American Poultry Congress & Exposition; St. Louis, Mo.; sec., American Poultry & Hatchery Federation, Don M. Turnbull, 521 E. 63rd St., Kansas City 10, Mo.

Aug. 13-18 — 12th World's Poultry Congress; Show Grounds of the New South Wales Royal Agricultural Society, Sydney, Australia; **Dr. Cliff D. Carpenter,** chairman, U.S. Participation Committee, 1207 Emerald Bay, Laguna Beach, Cal.; Dr. A. William Jasper, secretary, c/o AFBF, 2300 Merchandise Mart, Chicago 54, Ill.

Aug. 24—Purdue Swine Day; Purdue University, Lafayette, Ind.; chm., R. A. Pickett, Animal Science Dept.

Dealers Assn.; State Office Bldg., Es-

Sept. 5-7—Cornell Nutrition Conference; Cornell University, Ithaca, N.Y.; chm., Dr. R. J. Young, Poultry Husbandry Dept.

Oct. 10-12—Association of American Feed Control Officials; Sheraton-Gibson Hotel, Cincinnati, Ohio; sec., Bruce Poundstone, Agricultural Experiment Station Bldg., University of Kentucky, Lexington.

Nov. 8 — Upper Peninsula Feed Dealers Assn.; State Office Bldg., Escanaba, Mich.; UPFDA, Box 342, Sault Ste. Marie.

Nov. 12-14 — Feed Production School; Continental Hotel, Kansas City; pres., Lloyd S. Larson, Feed Production School, Inc., 20 W. 9th St. Bldg., Kansas City 5, Mo.

1963

March 24-29 — Grain Elevator & Processing Superintendents; Commodore Perry Hotel, Toledo, Ohio; sec., Dean M. Clark, 1115 Board of Trade Bldg., Chicago 4, Ill.

Direct Sales Unit Formed by Co-op

HARRISBURG, PA.—Creation of a new direct sales services department has been announced by Pennsylvania Farm Bureau Cooperative Assn.

The cooperative also announced that it has appointed a well-known eastern feed man, W. Dale Anderson, as manager of the new department. "We have named Mr. Anderson to this important post in scheduling expansion in this important field of service to farmers in our state," said Lester M. Shughart, director of distribution for the co-op. "He will be developing programs, sales and services to large users and direct sales patrons under the existing policies and programs of the regional cooperative.

"We have had large user and deferred payment programs for some time, but because our feed sales supervisors are busy working with retail personnel, they have not been able to devote sufficient time to this growing direct sales program.

"We recognize the trend in agriculture today demands the direct delivery approach in many instances," Mr. Shughart said. "Therefore, we have named Dale Anderson to develop and expand programs which will benefit farmers throughout the state."

Mr. Anderson's experience includes: Three years as a supervisor of vocational agriculture; serving in a sales capacity at the former Anderson Feed & Grain Co., York, Pa., where he was also secretary of the company, and 10 years with Hespenheide & Thompson Co., York.

UNDERGOES OPERATION

PETALUMA, CAL. — Dave Soren, manager of the Dairymen's Feed & Supply Cooperative, Petaluma, has had a successful cataract operation on his eye. He will be confined to the Kaiser Memorial Hospital in Oakland for two weeks.

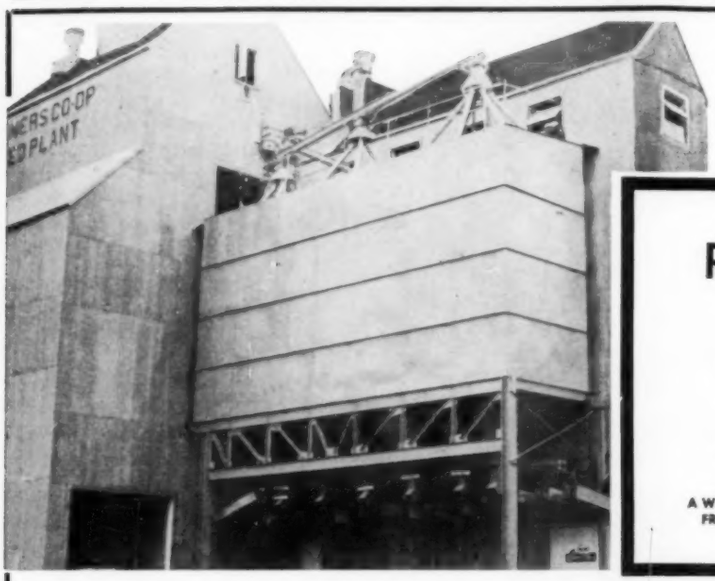


Photo shows Forster's new bulk load-out system installed for Farmers Co-op, Caldwell, Kansas

Remodeling,

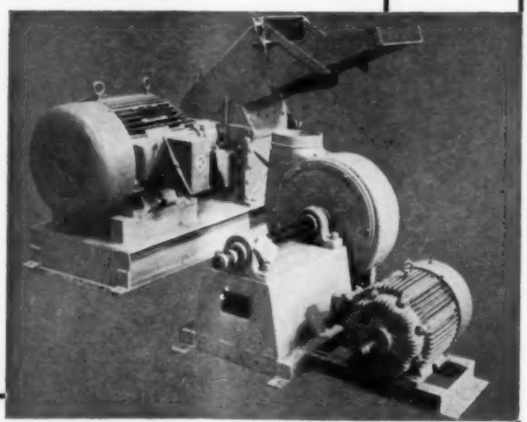
Additions,

or Repairs

A WORLDWIDE REPUTATION FOR QUALITY
FREE ESTIMATES—WE FLY ANYWHERE

New FORSTER All-Purpose Hammer Mill

- More efficient on hay grinding
- Separate fan increases capacity 30%
- Improved rotor design cleans mill faster
- More even wear on hammers
- Cuts maintenance cost
- Gives continuous service



MANUFACTURING FORSTER COMPANY

ADA, OKLA FEderal 2-6020

FORSTER MANUFACTURING CO., ADA, OKLA.
Gentlemen: We are interested in more information.

☐ New FORSTER All-Purpose Hammer Mill

NAME .....

COMPANY NAME .....

ADDRESS .....

CITY ..... STATE .....

FS-12-16

Cable Address: Parrhein

P&H

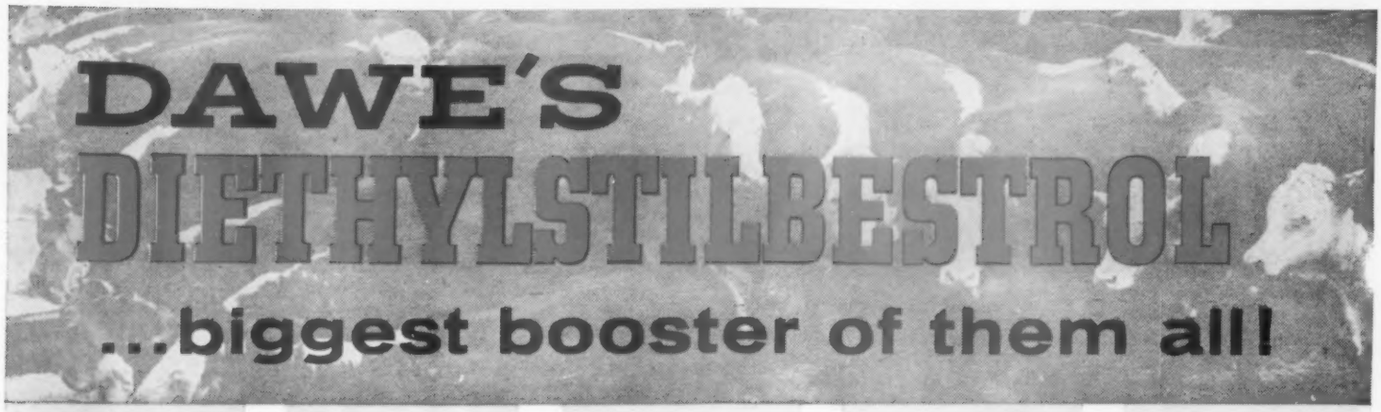
GRAIN • FLOUR • FEEDS •

Domestic & Export

PARRISH & HEIMBECKER LIMITED

Export Office — TORONTO, CANADA

WINNIPEG — CALGARY — MONTREAL



DAWE'S DIETHYLSTILBESTROL ...biggest booster of them all!

BOOSTS feed mill profits

—because it gives feed manufacturers the best sales story they have ever had to tell cattle feeders. Reports to the American Society of Animal Production indicate that diethylstilbestrol is worth $7.00 per head to feeders (see Bulletin below). In six years' time, it has gained such acceptance that 80% of all beef cattle marketed now receive it.

BOOSTS feed performance

—high-grain rations and high-roughage rations alike. Diethylstilbestrol is *not* a substitute for feed. Cattlemen must continue to feed a balanced ration for good results. But the addition of Dawe's Diethylstilbestrol Premix *does* boost the ability of any ration to produce gains.

BOOSTS gains 14% on 10% less feed

—according to the average of diethylstilbestrol tests that have now continued for more than six years, with thousands of cattle and many different rations. Dawe's Diethylstilbestrol Premix is manufactured and sold under license granted by Iowa State University Research Foundation, Inc., under its U. S. Patent No. 2751303.

BULLETIN!

May 31, 1961—Latest diethylstilbestrol test results released today at Iowa Cattle Feeders Day show 9.1% improvement in feed conversion. Yearling steers, fed a supplement containing diethylstilbestrol in dry lot for 139 days, returned approximately *$9 more profit per animal* than those not receiving it.

Diethylstilbestrol Premix is one product in Dawe's complete line of beef cattle feed additives:

Fixtay (Vitamin A) *Choline Chloride* *Dawenzyme*
Vitamin D *Fixtay-Dee* *Trace Minerals*

Dawe's

DAWE'S LABORATORIES, INC.
4800 SOUTH RICHMOND STREET, CHICAGO 32, ILLINOIS

WORLD'S OLDEST AND LARGEST SPECIALISTS IN FEED FORTIFICATION

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Specialists in Leasing Equipment to the Feed Manufacturing Industry

ERIEZ Magnetic Minute
60 seconds that will help you improve operating efficiency.

NOW!
THERE'S AN ERIEZ MAGNETIC DRUM FOR MOST EVERY INDUSTRIAL APPLICATION—LARGE OR SMALL

Whether you're processing fine, lightweight material or bulky, highly abrasive material, you'll find an Eriez magnetic drum separator to fit the job.

New 30" and 36" diameter Drums, capable of handling volumes up to 25,600 cu. ft. per hour, expand the Eriez line of magnetic drum separators to provide efficient removal of iron contamination in more industrial processes than ever before! Eriez drums now include sizes from 12" to 36" in diameter and widths of 8" to 84".

All models have these exclusive Eriez features: easy access to bearings without disassembling drum; simple removal of drum from housing without removing housing from flow line; convenient inspection panels at front and back of drum housings.

Models include magnetic drums and controlled-feed, packaged drum separators complete with housing and motor drive . . . standard and heavy duty constructions . . . with high intensity ERIUM®-Powered magnetic circuits for greatest separation efficiency.

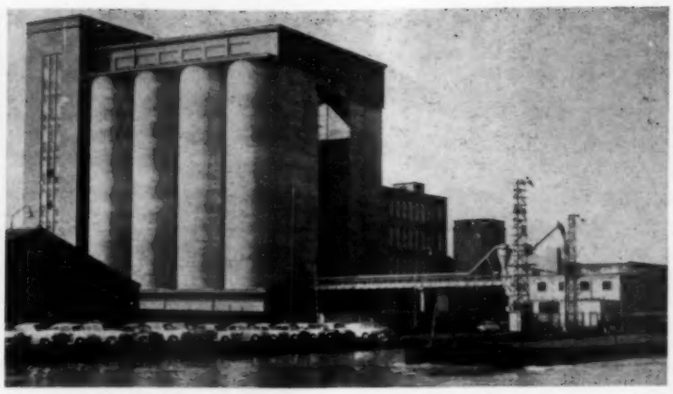
For further information and consultation at no obligation, write:

ERIEZ MANUFACTURING CO.
1152 Magnet Dr., Erie, Pa.
ERIEZ OF CANADA, LTD.
P. O. Box 5, Sta. W—Toronto, Ont.

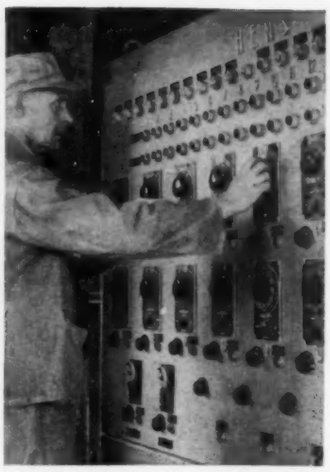
MAGNA-THOUGHT
Keeping step with the growth of American and world-wide industry, Eriez continues to improve and expand its magnetic separation equipment to meet the challenges of new processes and increased production volumes.

R. A. WHITE
Product Mgr.
Separation Div.

ERIEZ
A GROWTH COMPANY . . .
10 NEW PRODUCTS IN THE LAST 5 YEARS



ANTWERP MILL—This is an exterior view of the Hens' Voeders N.V. feed mill at Antwerp, Belgium, as seen from across the Albert Canal. The mill has a capacity of 45 tons formula feed per hour. Antwerp is the base of operation for the fast-growing firm.



CONTROL PANEL — This control panel, imported from the U.S., operates the Hens' Voeders, Antwerp, Belgium, feed mill. The electronic panel, when installed, was the first used in Europe.

Belgian Feed Firm Uses Modern Methods to Grow

By Special Correspondent

The feed industry of Europe is making strides paralleling those of the U.S.; this includes the small country of Belgium, which holds a strong position in the feed manufacturing picture on the continent.

In Belgium, which has a population about equal to New York City, Hens' Voeders N.V., Antwerp, is among the feed pioneers. The firm also stands with the leaders in the formula feed industry in Europe.

Stressing scientific development and using the latest equipment and methods of feed manufacture and distribution, Hens' Voeders has expanded into France, Spain and Germany. It has also established affiliated companies dealing in pet foods, poultry equipment, pharmaceuticals, poultry packing, grain imports and publishing.

Much of the development results from yearly study trips to the U.S. by Karel Hens, president, and Frans VanDooren, general managing director. Factory improvements imported from the U.S. include a Richardson electronic control panel and Sprout-Waldron mill equipment and bulk delivery trucks.

The Hens Antwerp mill is on the Albert Canal, and grain reaches there by barge. The raw materials are automatically stocked by two grain elevators operating at a speed of 20-75 tons per hour. The plant is located on an eight-acre tract with the mill occupying just over 1½ acres. Production capacity is 45 tons per hour. The Richardson panel which operates the factory was the first of its kind installed in Europe.

Also included are modern, air-conditioned offices and fully equipped laboratories.

Bulk delivery, which has become very popular in Belgium, was pioneered in Europe by Hens' Voeders in 1956 when they became the first to begin delivering feed in bulk. Ten bulk trucks now work day and night delivering feed, sometimes a distance of 140 miles. The company has installed 1,500 bulk bins for its customers.

Karel Hens Frans Van Dooren

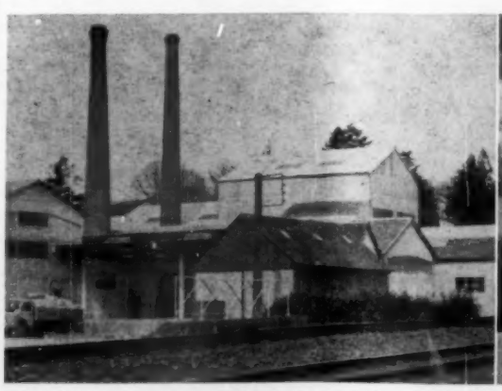
The firm has highly specialized department heads who speak 3-5 languages. In its laboratory, a chemist, three veterinarians and a bacteriologist work together. Four large experiment stations are fully equipped with hatcheries and pig nurseries.

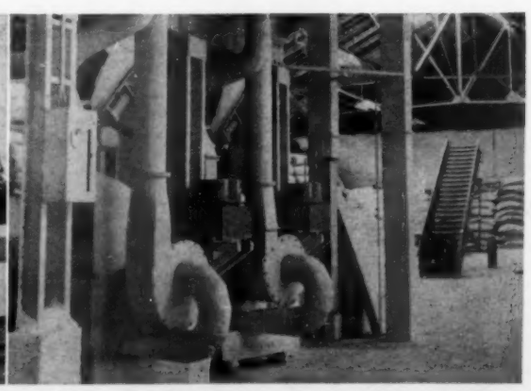
Representatives of Hens' Voeders, though they have selling as their main duty, are highly specialized servicemen, expected to give an immediate answer to most questions asked by customers.

These agents receive a training course of several months at experimental stations where continuous studies are being made of nutrition, genetics, hatchery work, diseases, rearing methods, housing and other factors affecting animals.

Chicken feed made Hens' Voeders

BULK DELIVERIES—This is one of 10 Sprout-Waldron bulk delivery trucks which work out of the Antwerp plant of Hens' Voeders. Trucks go as far as 140 miles to make deliveries. The company has installed 1,500 bulk bins for its customers.





FRENCH MILL—Pictured here is an exterior and an interior view of the Hens' mill at Rennes, Brittany, France. The firm will soon have three mills in this part of France. In addition, it has also expanded from Belgium into Spain and Germany.

well known, as the broiler industry has expanded since World War II. U.S. strains of chickens and American labor saving ideas have gained acceptance. Units of thousands of layers or tens of thousands of broilers are no longer a rarity, and housing of the animals compares with the best in the U.S.

The emphasis is not entirely on poultry feeds, however. Salesmen of pig feed, for instance, are specialized in that they do not concern themselves with chicken feed. There is also a specialized veterinarian in hogs at the service of Hens' clients.

A separate factory specializes in the manufacture and sale of pet foods, some of which is exported as far as Switzerland.

In 1956, the firm started a subsidiary in France, Sonoral-Hens'. In 1957 a second factory was added to Sonoral, and a third one was added last year, so that an important part of all French poultry is being fed Hens' formula feeds. Two more plants are under construction.

Piensos Hens', Inc., was started in Barcelona, Spain, in 1959. A second factory is being built in Reus and a third is scheduled to be built in Madrid.

The firm's latest development is construction of a factory near Dortmund, Germany.

In "old Europe," say company officials, "new" developments and techniques have been rapidly showing the way to a modern feed industry.

EXPELLER
SOYBEAN OIL MEAL
AND PEASIZE CAKE
43% PROTEIN — 4% FAT
The High-Fat, High-Protein, High-Energy Basic Ingredient for All Feeds and
DOG FOOD RATIONS
PREFERRED by Feed Manufacturers from Coast to Coast
AVAILABLE in carloads and trucklots throughout the year
from our centrally located plant
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Orvel Cockrel
Director of Marketing

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Nebraska Poultry Industry Is Analyzed

LINCOLN—While the poultry industry in Nebraska needs reappraising as to the direction it is heading, it is operating on a sounder basis than it appears at first glance.

This analysis was made by Doyle Free, executive secretary of the Nebraska Poultry Improvement Assn., at the group's annual convention in Lincoln.

Nebraska is out of step with some of the major poultry-producing areas of the nation as to size of laying flocks, Mr. Free told poultrymen gathered at the National Guard Armory. Nebraska continues to produce more laying flock units than all other areas, which have dropped small flocks, he pointed out. Mr. Free explained that a 1,500-bird laying flock is small in other regions but still is considered fairly large in Nebraska.

However, the official cautioned that a direct comparison cannot be made with other areas because poultry still ties in directly with other farming enterprises in Nebraska, with only a small amount of specialization.

Charge Refuted

Refuting a charge leveled by some critics that the Nebraska poultry industry is "dead," Mr. Free noted that many of the small flocks in Nebraska are composed of pullets. Pullet eggs are of better quality—both shell and interior—than those laid by older hens.

Misleading Impression

Mr. Free said two factors contribute to a misleading impression of the number of poultry on farms in Nebraska:

1. More and more chickens are reared and kept inside buildings now, with the result that the casual observer driving down the road doesn't see as many chickens on free range as in the past.

2. Some centralization of flocks has taken place, with only one farm in three having chickens when compared to farm flock populations of several years ago.

"There have been 10 million chickens on Nebraska farms for the past 3-4 years," Mr. Free concluded, "and egg production reached a record high in 1960."

In another presentation during the morning session, Dr. Thomas W. Sullivan, associate professor of poultry husbandry at the University of Nebraska, said that no acceptable man-made substitute has ever been found to replace the egg shell as packaging material.

"The egg shell serves as an excellent package for a near perfect, but highly perishable food and the chick embryo," he pointed out.

Shell Problems Worse

Strong egg shells are important in carrying out this function, but egg shell problems have become more acute in recent years, the University researcher revealed. "This is probably due to the development of very high-producing strains of birds and the use of high-energy laying rations," Dr. Sullivan said.

At least 12 different mineral elements are required by poultry, according to Dr. Sullivan. Calcium is needed in the largest quantity and is perhaps the most important for the laying hen, he added.

Ash or mineral components make up 3 to 4% of the live weight of the mature chicken. And over 70% of the body ash is calcium and phosphorus. Minerals constitute over 10% of the weight of the whole egg, and are principally found in the shell.

Dr. Sullivan reported on research that indicates calcium levels of 2.5 to 2.8% are required for maximum egg production. Experimentation also has revealed that egg shell thickness and specific gravity can be significantly increased by calcium levels up to 4.8%.

Dr. Sullivan listed five factors that influence egg shell quality and the calcium requirements of laying hens. They are: genetics of the strain or breed involved; rate of egg production; age of bird; environmental temperature, and energy content of ration.

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Canada Holds Hearing On Freight Assistance

MONTREAL — A three-man committee appointed to study the question of freight assistance on the movement of feed grains to Canada's eastern maritime provinces began hearings here recently.

Canada freight assistance does not apply to U.S. feed grains moving into the maritime ports. Feeders in those three provinces, New Brunswick, Nova Scotia and Prince Edward Island, contend that the present freight assistance policy on western feed grains is inadequate to offset the cheaper U.S. oats and corn entering Ontario and Quebec, jeopardizing their feeding position when it comes to marketing livestock at competitive prices.

Since the beginning of August to November 22, 10,247,000 bu. of American grain has moved into Canada, all of it into eastern positions and the bulk of this adjacent to feeding areas in Ontario and Quebec. Only about 3,400,000 bu. of the total is in positions such as Baie Comeau to suggest export clearances overseas. The Baie Comeau total has been made up of 647,000 bu. of wheat, 15,000 bu. of barley, 257,500 bu. of corn and 1,327,000 bu. of soybeans.

More than 2,800,000 bu. of U.S. oats has entered Canada in the period under review and 5,084,000 bu. of corn. The corn total includes slightly more than 1 million bushels in the National Harbour Board's elevator at Quebec City. This could be for export or Canadian domestic use, it was pointed out.

PROCESS EMERGENCY FEED

CASPER, WYO. — A feed processing operation has begun at the Natrona County Airport, Dale Carlson, owner of Natrona Feed Products Co., has announced.

Natrona Feed Products has installed several large storage tanks and other equipment for grinding feed grains, blending with other ingredients and manufacturing livestock cubes.

Emergency livestock feed coming into central Wyoming under the drouth program can be processed at the new mill, he said. Warehouse space leased by the firm has been approved by the U.S. Department of Agriculture for handling of emergency feeds, it was reported.

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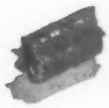

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FEED CONTROL COMMENT

By BRUCE POUNDSTONE
Secretary, Association of American Feed Control Officials
Kentucky Agricultural Experiment Station, Lexington

Vitamin, Mineral Guarantees

All states permit guarantees for mineral content in terms of calcium, phosphorus, iodine and salt, and vitamin content guaranteed as prescribed for each vitamin. These guarantees may be made as a part of and in addition to the chemical guarantees for crude protein, crude fat and crude fiber.

Occasionally a manufacturer runs into trouble because he mentions somewhere on his label that his product is a "high vitamin carrier" or that it contains "minerals." He receives a letter from the control official that this label is not acceptable and concludes that regulations in that particular state do not permit such guarantees.

The trouble is not that he has mentioned minerals but in the way he has gone about it. Most control officials frown at stressing one ingredient or group of ingredients to the exclusion of others. The Association of American Feed Control Officials has a regulation stating that this must not be done in the brand name of a non-medicated feed. Paragraph 1 (b) in Rules and Regulations under the Uniform State Feed Bill reads: "A name of a non-medicated feed shall not be derived from one or more ingredients of a mixture to the exclusion of other ingredients and shall not be one representing any component of a mixture unless all components are included in the name." This appears on page 18 of the 1962 edition of the Annual Publication of the Association of American Feed Control Officials.

The matter of stressing an ingredient elsewhere on the label, although not specifically mentioned in the Annual Publication of the AAFCO, is covered by regulation in some states. This means that companies doing business in several states will be bound by the regulation in all the states where they do business if one of them has the regulation and they wish to use a uniform label.

It is possible in many states to make mention of vitamin or mineral content "elsewhere" on the label if a quantitative guarantee is made. In other words the expression "contains minerals" may not be objected to if a guarantee appears as outlined earlier. A manufacturer will likely have no trouble if mention of "minerals" or "vitamins" is supported by a quantitative guarantee.

Nitrogen Free Extract

For several years feed control officials have been endeavoring to get nitrogen free extract guarantees removed from feed labels. The end appears to be in sight. Fewer and fewer such labels are seen and it is hoped that by 1962 there will be no more of these.

Code Designations

The matter of code designations in product names, sidebar labeling and identification numbering systems continues in discussions between control officials and industry. This was reviewed at some length in this column in the July 8 issue.

The report of the Medicated Feed Labeling Committee at the October meeting of AAFCO in Washington and published on page 70 of the 1962 annual publication carries the following paragraphs on this subject:

"2. Code designations in product names. Are abbreviations of drugs and drug levels in the product name acceptable? The Committee agreed that an example of a product name which would not be acceptable is 'Doe's .00275FRZ Chick Starter.' On the other hand, code designations are acceptable if they do not represent levels or abbreviations. Numbers usually are preferred over letters. Some of the feed industry advisory group expressed a desire to use letters, however."

Implementing this idea further, the last paragraph of the section on "Submitting Copy for Registration" of medicated feed labels now concludes with the following sentence:

"Code designations should not include letters which represent abbreviations of drugs, vitamins or other components of the feed since this may emphasize certain ingredients more than others (See Regulation 1, p. 18)."

This statement appears on page 28 of the 1962 publication.

The sample Type 1 label on the next page, page 29, in the same publication carries a code designation using numerals only. Formerly a letter was included in this designation but this has been dropped in favor of the principle just mentioned.

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Marketing Agreement Advantages Cited by Nulaid Association

SAN LEANDRO, CAL. — Nulaid Farmers Assn. officials say marketing agreements, which in Nulaid's case are contracts between it and its members, "make it possible for the turkey raiser, the fryer grower and the egg producer to pool their resources in the joint effort toward obtaining a maximum return for their product on the market."

Nulaid, which has had an egg marketing agreement for some time, entered the field of poultry marketing in August of this year with the introduction of a poultry marketing agreement. The association's experience with these marketing agreements prompted statements supporting their effectiveness and success which appeared in the November-December, 1961, issue of Nulaid News.

Nulaid's original egg marketing agreement "has served to protect and represent all members and their business," the publication notes. "The new poultry marketing agreement adds greater strength to the association. It means increased economic advantage to members and increased volume of business to the association."

Two-Year Contract

The poultry marketing agreement is a two-year contract requiring the member to market his poultry through the association and requiring NFA to accept and market the poultry produced by the member.

"During times of surplus, it is to the member's advantage to have a contract for it assures him of a continual market for his product," Nulaid News explains. "During a time of shortage, the poultry marketing agreement is of great importance to Nulaid for it guarantees to the association a continued steady volume of poultry to meet the needs of established retail outlets."

Main Provisions

Some of the poultry marketing agreement's main provisions include these:

- Delivery of poultry to the association conforms with a given schedule. U.S. Department of Agriculture standards apply in grading. Title passes to the association upon delivery.
- A pool price is established for all poultry delivered during a given period of time despite market fluctuations. The association is permitted to close or extend the time for closing of any pool and may exclude poultry which does not meet quality or grade standards.
- The participating member authorizes NFA to deduct no less than ½¢ per pound of poultry marketed for investment by the member in the association's capital fund.
- The association pays an advance to the member, based on a determination of anticipated sales.
- Should a member fail to deliver to the association all of the poultry agreed upon, the association may claim damages.
- The participating member agrees to purchase his feed and other supplies from the association during the contract period. And the association is committed to sell the member these supplies.

"Stabilizing Influence"

Nulaid notes that a marketing agreement "has a stabilizing influence on the market. . . . Pooling has a definite advantage for it reduces the hazards of a seasonal market."

Also, according to Nulaid, "the entrance of Nulaid into the marketing field has a beneficial effect on all poultrymen whether or not they are signers of a contract."

Grants Received

BERKELEY, CAL. — The University of California has received grants totaling almost $6,000 to promote research projects in the field of animal nutrition and related subjects.

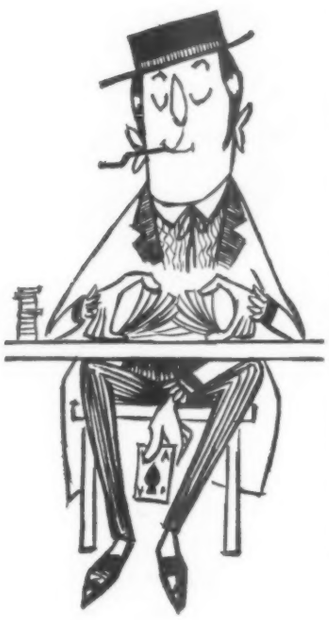
Commercial Solvents Corp. gave $3,000 for a study in poultry science, and American Dehydrators Assn. gave $1,200 for research on dehydrated alfalfa pellets as a supplement for range sheep.

A third project underway was supported with a $1,000 donation from the Date Administrative Committee for digestion tests of dehydrated date meats as feed for stock. A grant of $700 from the California Turkey Federation is to support research in turkey diseases.

MILL BEING CONSTRUCTED

WEATHERFORD, TEXAS — Construction is underway on a new feed mill for the Dairyman's Cooperative here. The plant will have a rated capacity of 100 tons per day, with bin capacity sufficient for a somewhat larger size plant. Riza & Co., Cleburne, Texas, designed and is installing the feed plant.

HERE'S SOMETHING THAT WON'T GET LOST IN THE SHUFFLE



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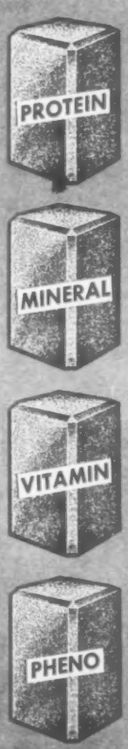

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Marketing Orders and the Future Envelop Arkansas Turkey Event

By DAVID MARTIN
Feedstuffs Special Correspondent

RUSSELLVILLE, ARK. — Producers, feed men, processors, hatcherymen and breeders pondered the immediate future of the turkey industry here last week end during the Arkansas Turkey Federation's annual convention and show. Proposed marketing orders for market turkeys and turkey hatching eggs, prospects for profits in 1962 and losses suffered this year occupied the thoughts of the 250 persons attending the event.

The conventioning industry representatives were told:

- The turkey industry is in trouble because of over-production.
- The industry is hearing about controls because "the big boys got their toes stepped on this year by low prices."
- The industry needs to do much more toward marketing its products and getting the consumer to eat more meat, particularly poultry products.
- The National Turkey Federation has not and probably will not announce an official stand on the marketing orders proposed. Officers of the federation who have testified at hearings have done so "on their own."
- NTF's executive secretary believes the turkey industry's problems won't be solved without government help and proposed that the National Turkey Advisory Committee, organized to determine the need for formulating marketing order proposals, be called back into session.
- Government controls are the cause rather than the answer to the industry's problems.
- It is likely that initiation of controls would bring about the development of a different type of turkey.
- The next big break in turkey nutrition probably will come in the field of amino acids.

Election and Show

Aside from considerations of where the turkey industry is and where it's going, the Arkansas Turkey Federation elected new officers, conducted a live and dressed bird show and had an auction at which the top-selling bird brought $5 lb.

No Surprise

Although the statement came as no surprise to anyone, Harold Dodgen of Harold Dodgen, Inc., Ozark, Ark., integrator, caused the delegates to sit up and take notice when he declared that the "turkey industry is in trouble."

Speaking during a panel discussion of "How Marketing Orders Will Affect the Arkansas Turkey Industry," Mr. Dodgen drew heavy applause with an appeal for less government involvement in agriculture.

He declared: "I'm definitely against controls. I don't like to have too many people tell me what to do. I don't like the USDA telling me what to do and every move to make. I want to be able to make those decisions myself."

Referring to losses suffered by some operators this year, he said: "The ones who had the most invested will lose the most. But when they get enough of it (losing money) they will get out. We know that we are producing far too many turkeys, and when it gets to hurting a man's pocketbook—which is close to his heart—he will get out."

Mr. Dodgen said he doesn't feel that USDA controls are the answer for the industry's problems. "They are a cause of it," he asserted. "The USDA controls grain prices, the medications we put in feed and water, compulsory poultry inspection and many other things. And the cost of these controls is tremendous. Other government involvements would be costly, too.

"To me it seems to be coming to a point where what the USDA wants is the only thing that counts. It doesn't seem to count very much because the industry is for something."

Mr. Dodgen charged that USDA "wants to control all of agriculture. . . . And they almost have."

Marketing Order Comment

Commenting on the marketing order proposal, Mr. Dodgen said he believes that the action would put "too much power in the hands of the secretary of agriculture. It seems to put a veto power in his hands by which he could do whatever he wants. The way I understand the order, his decisions would be final, and we would have no recourse whatever."

Mr. Dodgen was applauded when he concluded: "This is a time for decision. Are we going to control, or are we going to be controlled? I believe we must maintain our freedom to operate as we see fit."

Harold Snyder Speaks

Harold Snyder, president of Arkansas Valley Industries, Inc., Dardanelle, Ark., another member of the panel, echoed Mr. Dodgen's thoughts on the marketing order.

"We must ask ourselves where these controls will put us in 5 or 10 years," he said. "Sure, we could make more money in the next few years under controls, but we must look ahead."

Mr. Snyder said future generations are involved in the marketing order controversy. "Harold Dodgen isn't particularly worried about himself," the AVI president observed. "But he is worried about the future of his two daughters and sons-in-law and his grandchildren."

Mr. Snyder called for more interest in marketing meat. He told the group of a recent week-long coast-to-coast trip in which he and other poultry industry officials discussed problems with the heads of five large grocery store chains and other executives.

"We talked to officials from New Jersey to California," Mr. Snyder reported, "and we found—as suspected—that there is still a great, great deal that we as producers can do to help ourselves.

"The chain stores and other marketing officials want to work with us. They admit that they haven't taken the initiative they should, but we must admit, too, that we have not taken the initiative we should have taken.

"We need to educate our consumers to eat more meat."

Over-Production

Pat Teague, Berryville, a member of the panel and Arkansas representative on the USDA National Turkey Advisory Committee, argued that over-production has brought about the present low price situation.

He said that nothing would have been heard about marketing orders if "the big boys had not gotten their toes stepped on this year by low prices.

"We are overlooking the fact that we produced 107 million birds this

(Turn to ARKANSAS, page 64)

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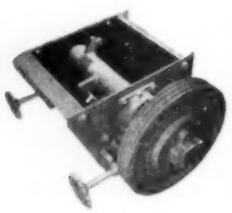

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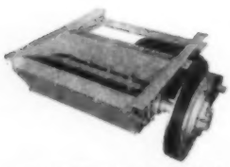

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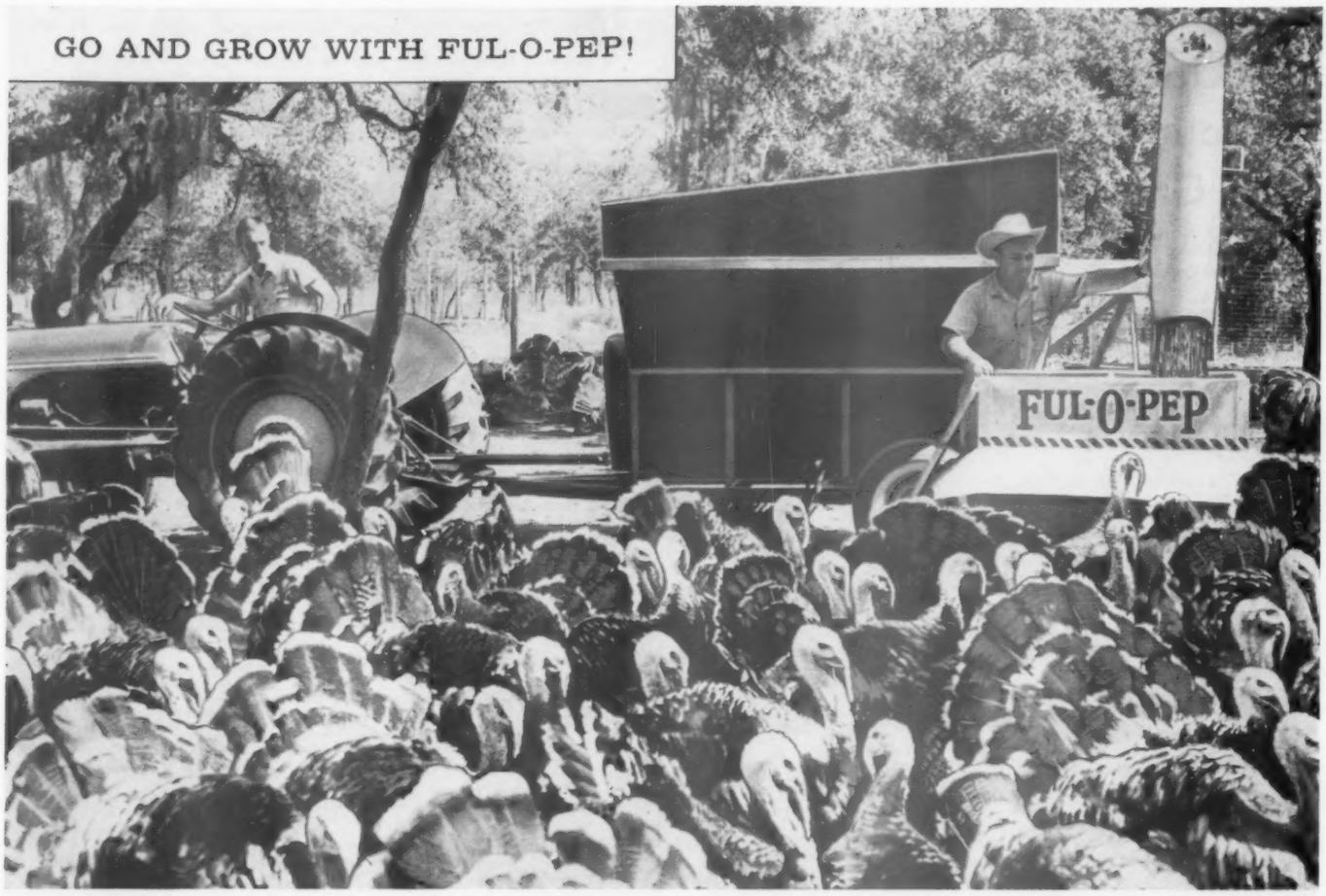


"Reputation of Ful-O-Pep for top conversions and top performance is a definite sales asset," said Frank Petras. "With Ful-O-Pep's record for efficiency, we found it fairly easy to line up good growers to put on contract." Above, Anton Krametbauer, one of the growers, unloads bulk feed into hoppers on range. John Michalec, service manager for Petras, gives him an assist on the tractor, while checking over Mr. Krametbauer's flock of Broad-Breasted Bronze.

"You can build on Ful-O-Pep's top feeding efficiency!"

—says Frank Petras, Petras Turkey Farm, Moulton, Tex.

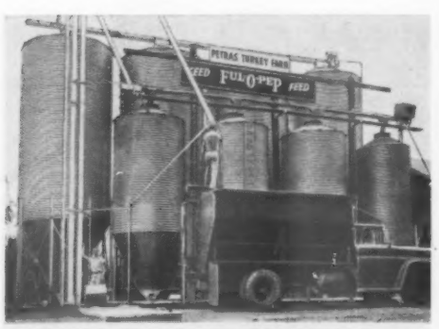
"Higher feeding efficiency is the big goal of poultry and livestock feeders today," says Frank Petras, of Petras Turkey Farm, Moulton, Texas, "because a few extra pounds gain per ton of feed can make a mighty big difference in your profit margins.

"We're located in a concentrated turkey feeding area, and our feeders are convinced of the high efficiency of Ful-O-Pep," Mr. Petras continued. "I tested it on 8,000 birds... and now all of my turkeys are raised on Ful-O-Pep feed 100%!

"Top feeding efficiency is a basic requirement for sound growth in the feed business," Mr. Petras said. "It's something you can build on. And we've found you can depend on Ful-O-Pep Concentrates for mixing highly efficient feeds."

GO AND GROW WITH FUL-O-PEP! *Get details of Ful-O-Pep's sound growth program. Write: Feed Sales Manager, The Quaker Oats Company, Merchandise Mart, Chicago 54, Ill.*

Frank Petras, of Petras Turkey Farm, Moulton, Texas, supplied feed for 112,000 birds this year—on his own farm, and on contract. "It's a sizeable investment," Mr. Petras said, "and we depend on Ful-O-Pep efficiency to help protect it."



This bank of bulk tanks has a holding capacity of 140 tons of Ful-O-Pep Concentrates, and 48 tons of grain. Six bulk bins inside of houses hold 4 tons of mixed feed each... and there are five 10-ton bulk tanks on growers' farms.

Grinding and mixing equipment consists of a 1½-ton mixer, and a 9-tons-per-hour crimper. All feed is mixed with Ful-O-Pep Concentrates, except for Ful-O-Pep Turkey Pre-Starter used. Above, Don Michalec pushes the button on a finishing ration.

FUL-O-PEP

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Hypothetical Example Compares . . .

Effects of Cash and Accrual Accounting as Applied to The Growing of Broilers

By Richard V. Julian
Accountant

EDITOR'S NOTE: *"The extent to which tax laws and their administration have served to facilitate over-expansion in the poultry industry" was recommended as an area of further study during the Oct. 24-25 National Conference on Poultry Industry Stabilization in Cincinnati (Feedstuffs, Oct. 28, page 1). It was observed at the conference, for example, that the use of the cash method of accounting (rather than the accrual method) for tax purposes lends itself to unsound expansion through deferment of tax liability.*

One of the speakers at the Cincinnati gathering was an accountant, Richard V. Julian of Touche, Ross, Bailey & Smart, Kansas City, who discussed cash vs. accrual tax accounting.

The article presented here is based on a hypothetical example which Mr. Julian used at the Cincinnati conference to compare the effects of the cash and accrual bases of accounting as applied to broiler growing.

♥ ♥

A man and his wife, no children, enter the broiler growing business. The following example compares the possible trends of this business through first good and then poor market conditions under two bases of accounting—cash and accrual.

HYPOTHESIS:

1. A broiler house with a capacity of 10,000 birds costs $4,000 of which they are able to finance 75% over a 7½ year period. Interest is not considered.
2. A broiler house may be depreciated over 10 years.
3. The average cost of raising broilers, excluding labor and depreciation, is 12¢ lb.
4. Average live weight of finished broilers is 3 lb.
5. They build 10 broiler houses. One house is started each week.
6. The growing period is approximately 8½ weeks, thus at any given time 8 houses are full and on the average the broilers are half grown.
7. Baby chicks cost 10¢ each, thus the inventory value of a half grown broiler is 23¢. Overhead costs are ignored.
8. Disease and condemnation losses are ignored. It is assumed that all birds started are sold.
9. During the first year each house is "turned" four times; in succeeding years each house is "turned" five times.
10. The cash flow generated from depreciation is applied toward payments on the loans.
11. For each additional 10 houses, help costing $6,000 a year is required.

COMMENTS:

In view of the good profit and strong market, capacity is doubled toward the end of the second year. The new houses are started during the last eight weeks of this year.

Without expansion or purchases in advance the cash basis profit at the end of the third year would be $82,600 and the tax thereon would be $39,800. In order to delay or avoid income taxes the cash must be spent prior to the end of the year. As a result, to delay taxes, a cash basis taxpayer must forecast his taxable income and determine how to spend this income some time prior to the year end. The temptation to expand again is very strong. This example assumes that production is again doubled.

I refer you now to the example on the accrual basis. Note that at the start of the third year he only has $21,500 available cash and at the end of that year he has $40,900. He cannot double production, sufficient money is not available. He could expand to a smaller degree; however, without any tax incentive and with a changing market, I assume that a wait-and-see attitude would be adopted.

As may be noted, the fourth year is disastrous for both the cash and accrual bases taxpayer. Because of marketing considerations and the expectation that the price would improve, both continued at full capacity through the year. The cash basis taxpayer, because of his larger capacity and loss, is out of business and bankrupt. The accrual basis taxpayer, however, has several choices: (1) He could continue hoping the market would improve, (2) he could liquidate and practically pay off his broiler house obligation or (3) he could liquidate, make required payments on his broiler house obligations and live for approximately two years, at the end of which period he would still have sufficient capital to re-stock 10 houses. He could, of course, have cut back production at any time during his fourth year without any tax consequences.

If the cash basis taxpayer had not expanded during the third year and ceased production at the end of the fourth year he would have $6,000 to pay in income taxes. Furthermore he may not realize the gravity of the situation since, if he continues production, he is still showing a profit of $24,800 and is still buying ahead. Note that near the end of the fifth year he is forced to either cease operations or substantially curtail his volume because of lack of funds.

Consider what might have happened if credit had been utilized on the purchasing of inventories and feed. The cash basis taxpayer could easily find himself in such a position that if production were curtailed he would be unable to pay these obligations after paying the income taxes on profits deferred from prior years.

Example Showing Effects of Cash Basis of Accounting on Broiler Growing

First year (average market 16¢ lb.):		
Selling price (400,000 broilers)		$192,000
Direct costs	$144,000	
Depreciation	4,000	148,000
Accrual basis profit		$ 44,000
Less cost of ending inventories (80,000 broilers)		18,400
Cash basis profit		$ 25,600
Living expenses	$ 6,000	
Income tax on cash used	600	6,600
Profit not reported, used to buy feed and supplies		$ 19,000
Second year (average market 16¢ lb.):		
Selling price (500,000 broilers)		$240,000
Direct costs	$180,000	
Depreciation	4,000	184,000
Accrual basis profit		$ 56,000
Add current year's costs deducted in previous year:		
Value of inventories	$ 18,400	
Feed and supplies	19,000	37,400
		$ 93,400
Deduct ending inventories (160,000 broilers)		36,800
Cash basis profit		$ 56,600
Down payment on 10 new houses	$ 10,000	
Living expenses	6,000	
	$ 16,000	
Income tax on cash used	4,000	
Reported cash basis profit		20,000
Profit not reported, used to buy feed and supplies		$ 36,600
Third year:		
Selling prices (1 million broilers):		
Four turns at average price of 15¢ lb.	$360,000	
Fifth turn at 10¢ lb.	60,000	$420,000
Direct costs	$360,000	
Depreciation	8,000	
Hired help	6,000	374,000
Accrual basis profit		$ 46,000
Add current year's costs deducted in prior years:		
Value of inventories	$ 36,800	
Feed and supplies	36,600	73,400
		$119,400
Deduct ending inventories (320,000 broilers)		73,600
Cash basis profit		$ 45,800
Down payment on 20 new houses	$ 20,000	
Living expenses	10,000	
	$ 30,000	
Income tax on cash used	10,000	
Reported cash basis profit		40,000
Profit not reported, used to buy feed and supplies		$ 5,800
Fourth year (average market 11¢ lb.):		
Selling price (2 million broilers)		$660,000
Direct costs	$720,000	
Depreciation	16,000	
Hired help	18,000	754,000
Accrual basis loss		$(94,000)
Current year's costs deducted in prior years:		
Value of inventories	$ 73,600	
Feed and supplies	5,800	79,400
Cash basis loss		$(14,600)
Tax refund from carrying loss back to first and second years		2,500
		$(12,100)
Living expenses during year		6,000
		$(18,100)
Value of investment in original inventory which returns upon liquidation		18,400
Available cash		$ 300
Remaining obligation on broiler house loans		$ 88,000

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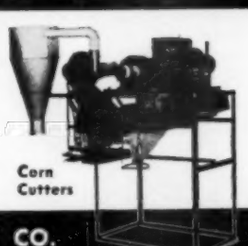
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If Grower Had Not Expanded

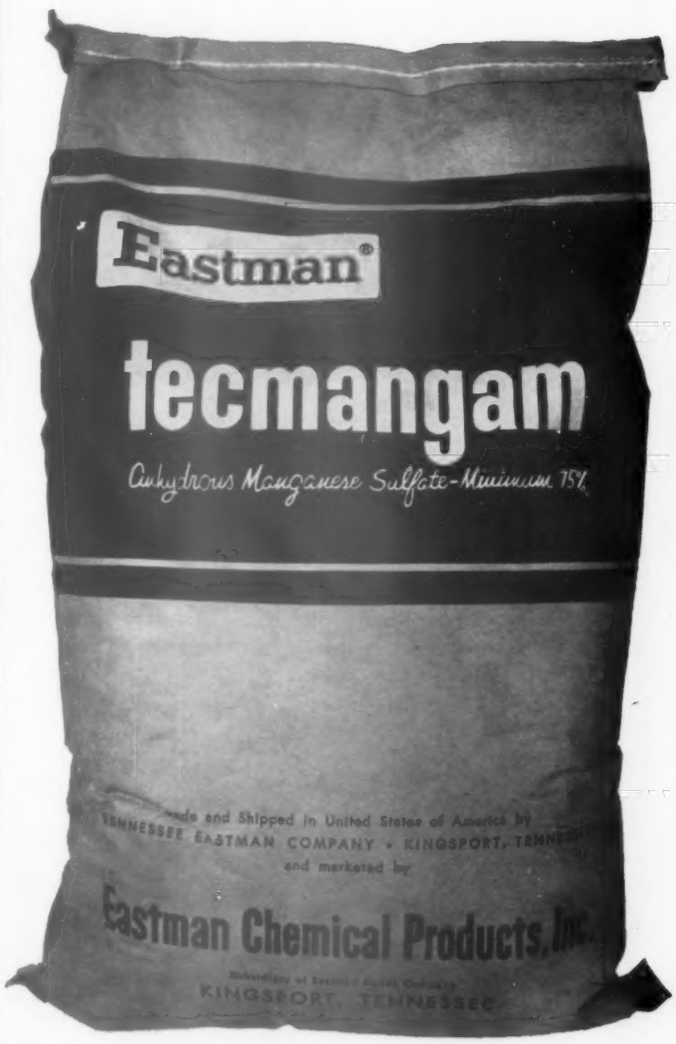
Let's see what would have happened if the grower had not expanded during the third year.

Third year:		
Accrual basis profit		$ 46,000
Add current year's costs deducted in prior years:		
Value of inventories	$ 36,800	
Feed and supplies	36,600	73,400
		$119,400
Deduct ending inventories (160,000 broilers)		36,800
Cash basis profit		$ 82,600
Living expenses	$ 10,000	
Income tax on cash used	3,800	
Reported cash basis profit		13,800
Profit not reported, used to buy feed and supplies		$ 68,800
Fourth year (average market 11¢ lb.):		
Selling price (1 million broilers)		$330,000
Direct costs	$360,000	
Depreciation	8,000	
Hired help	6,000	374,000
Accrual basis loss		$(44,000)
Add current year's costs deducted in prior years:		
Value of inventories	$ 36,800	
Feed and supplies	68,800	105,600
		$ 61,600
Deduct ending inventories		36,800
		$ 24,800
Used for living expenses	$ 6,000	
Income tax on cash used	600	6,600
Unreported profit, used to buy feed and supplies		$ 18,200
Fifth year (same selling price and costs as fourth year):		
Accrual basis loss		$(44,000)
Add current year's costs deducted in prior years:		
Value of inventories	$ 36,800	
Feed and supplies	18,200	55,000
Cash basis profit if out of production		$ 11,000
Living expenses during year	$ 6,000	
Income taxes on cash profit	1,900	7,900
		$ 3,100
Value of investment in original inventory		18,400
Available cash		$ 21,500
Remaining obligation on broiler house loans		$ 36,000

Example Showing Effects of Accrual Basis of Accounting on Broiler Growing

For details of profits for the first three years, refer to the example on the cash basis of accounting.

			Cash on hand
First year:			
Accrual basis profit		$ 44,000	
Income taxes thereon		15,500	
		$ 28,500	
Living expenses		6,000	$ 22,500
Second year:			
Accrual basis profit		$ 56,000	
Income taxes thereon		22,600	
		$ 33,400	
Living expenses	$ 6,000		
Down payment on 10 houses	10,000		
Inventory of new houses	18,400	34,400	(1,000)
Third year:			
Accrual basis profit		$ 46,000	
Income taxes thereon		16,600	
		$ 29,400	
Living expenses		10,000	19,400
Fourth year (average market 11¢ lb.):			
Selling price (1 million broilers)		$330,000	
Direct costs	$360,000		
Depreciation	8,000		
Hired help	6,000	374,000	
Accrual basis loss		$(44,000)	
Tax refund from carrying loss back to first year		15,500	
		$(28,500)	
Living expenses		6,000	
		$(34,500)	
Investment in inventories		36,800	2,300
Available cash if out of production			$ 43,200
Remaining obligation on broiler houses			$ 44,000



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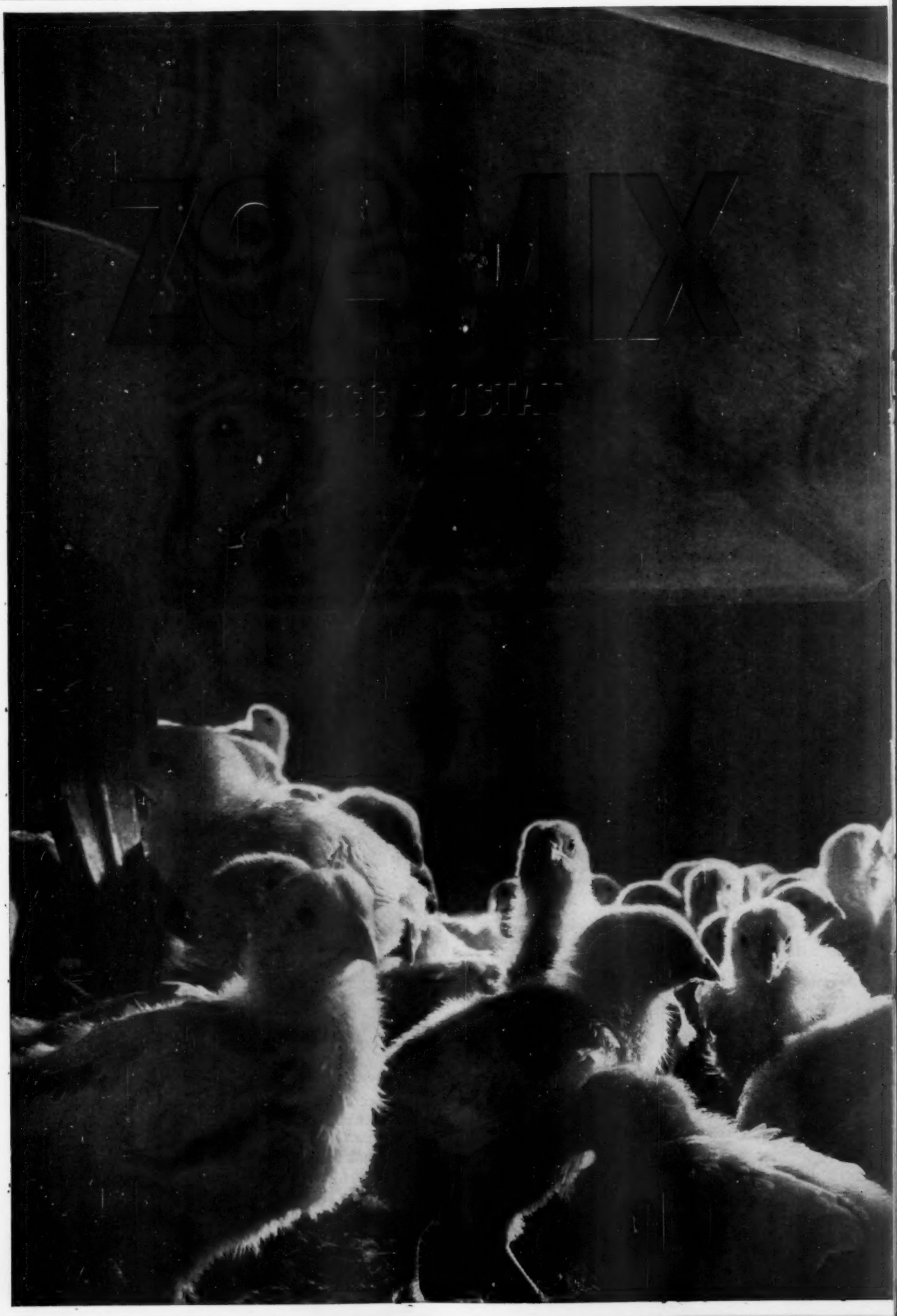
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Steps to Clearance Of New Stilbestrol Product Described

LOS ANGELES—Steps leading to recent clearance by the Food and Drug Administration of a new diethylstilbestrol cattle implant for use with or without an approved oral stilbestrol feeding program were described recently in a technical report issued by the firm which distributes the product nationally for the manufacturer.

The report concerns "recent events responsible for postulations leading to the new concept of DES (diethylstilbestrol) implant treatment in conjunction with DES feeds to achieve significantly higher weight gains and improved feed conversion than is possible with either DES treatment (implant or feed additive) alone."

As an introduction to its discussion of FDA's clearance of the new implant, Dibestrol "C," Discan Corp., Los Angeles, national distributor of the product for Sterol Derivatives, Inc., also of Los Angeles, notes, "Prior clearance of any DES feed or implant (by FDA) does not imply approval of its use in a combined treatment, without satisfactory tissue residue studies of a controlled experiment by qualified investigators." Such a tissue residue study was programmed by Sterol Derivatives, following procedures suggested by FDA. Also, tests were conducted to show the efficacy of the new implant.

Discan's report observes, "The withdrawal of DES feeds 48 hours prior to slaughter has been a continuing problem to FDA, feedlot operators and custom feeders, particularly when the cattle owners or buyers requested immediate shipment for slaughter without sufficient notice to comply with withdrawal time requirements. The economics of selling cattle at the best market, or holding for a better market during an unfavorable situation, had an indirect, but important, effect upon the ability of feedlots to comply with regulations.

"Problem Resolved"

"Considerable discussions among cattlemen, their consultants and university animal husbandry researchers finally resolved the problem as follows:

"It was a common western practice in recent years to fatten cattle on full DES feeds to lightweight (950-1,050 lb.) slaughter over approximately 100-120 days to meet the increasing demand for lighter cuts of beef. Inasmuch as profitable gains have been achieved in 90-100 days with DES feeds, it was conceivably possible to solve the 48-hour withdrawal problem by: (1) Implanting (24-30 mg.) steers and heifers as an adjunct to DES feeds at the start of feedlot finishing and (2) replacing DES feeds with regular high-energy feeds at the 90-100 day period and relying upon implants for the carry-over response in gains for the remaining 20-30 day fattening period.

"Thus," the report continues, "no withdrawal or marketing problems, if the postulation could be proven in experimental trials.

"It had also been substantiated that DES feeds were equal to 24-30 mg. implants in growth response and feed conversion under like test conditions with the same degree of safety. Therefore, the implants should provide carry-over activity for the period of finishing after DES feed withdrawal up to at least 120-130 days."

Preliminary Trials

Discan reports that a series of preliminary combined treatment trials conducted by nutritionists and veterinarians at a number of feedlots confirmed that: "(1) The 24-30 mg. implants would maintain growth response with cattle on full feed for at least 30-40 days after DES feeds were withdrawn in 90-100 days; (2) there was no greater incidence of side reactions than observed with single treatment stilbestrol preparations, either as feeds or implants, and (3) equally important was the unanticipated significant increase in weight gains exceeding gains produced with either implants or DES feeds alone."

Other trials re-confirmed these results, according to Discan, which says "the resolution of the DES feed withdrawal problem . . . engendered a new, more profitable concept in fattening cattle for market."

Discan's technical report relates the results of studies conducted by Dr. M. T. Clegg, department of animal husbandry, University of Cali-

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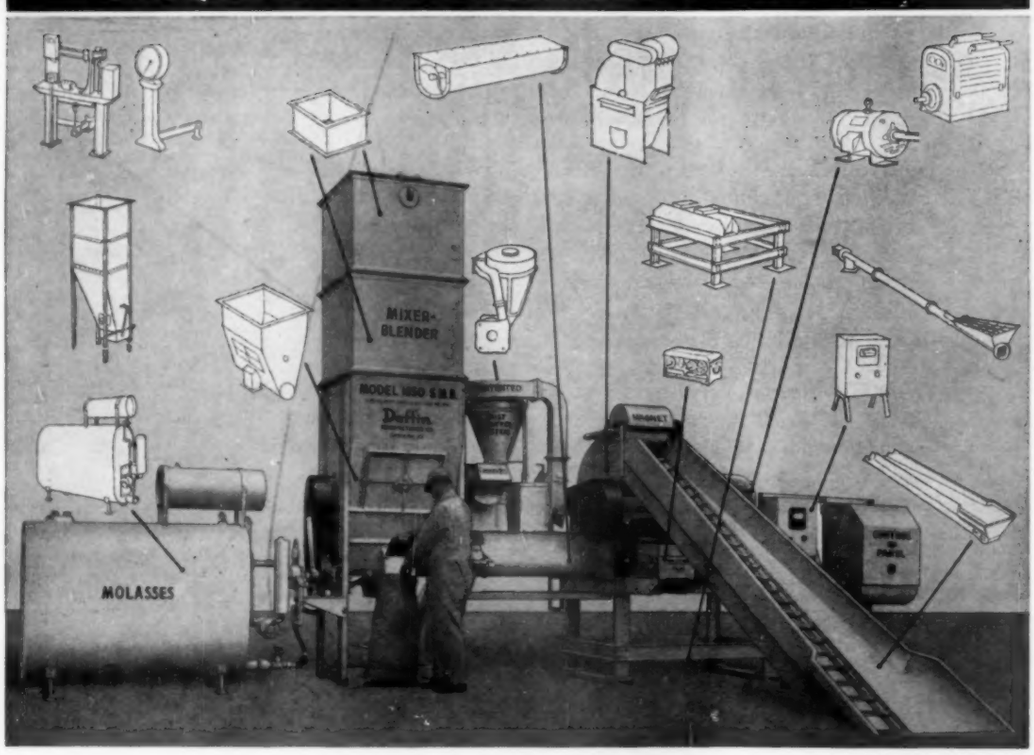

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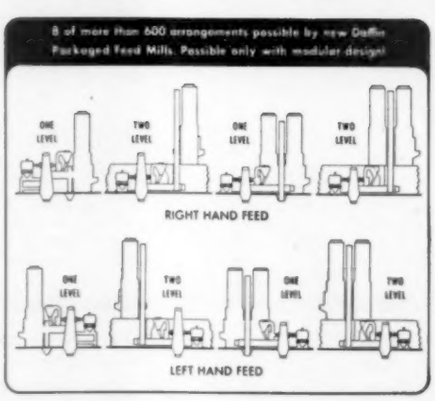

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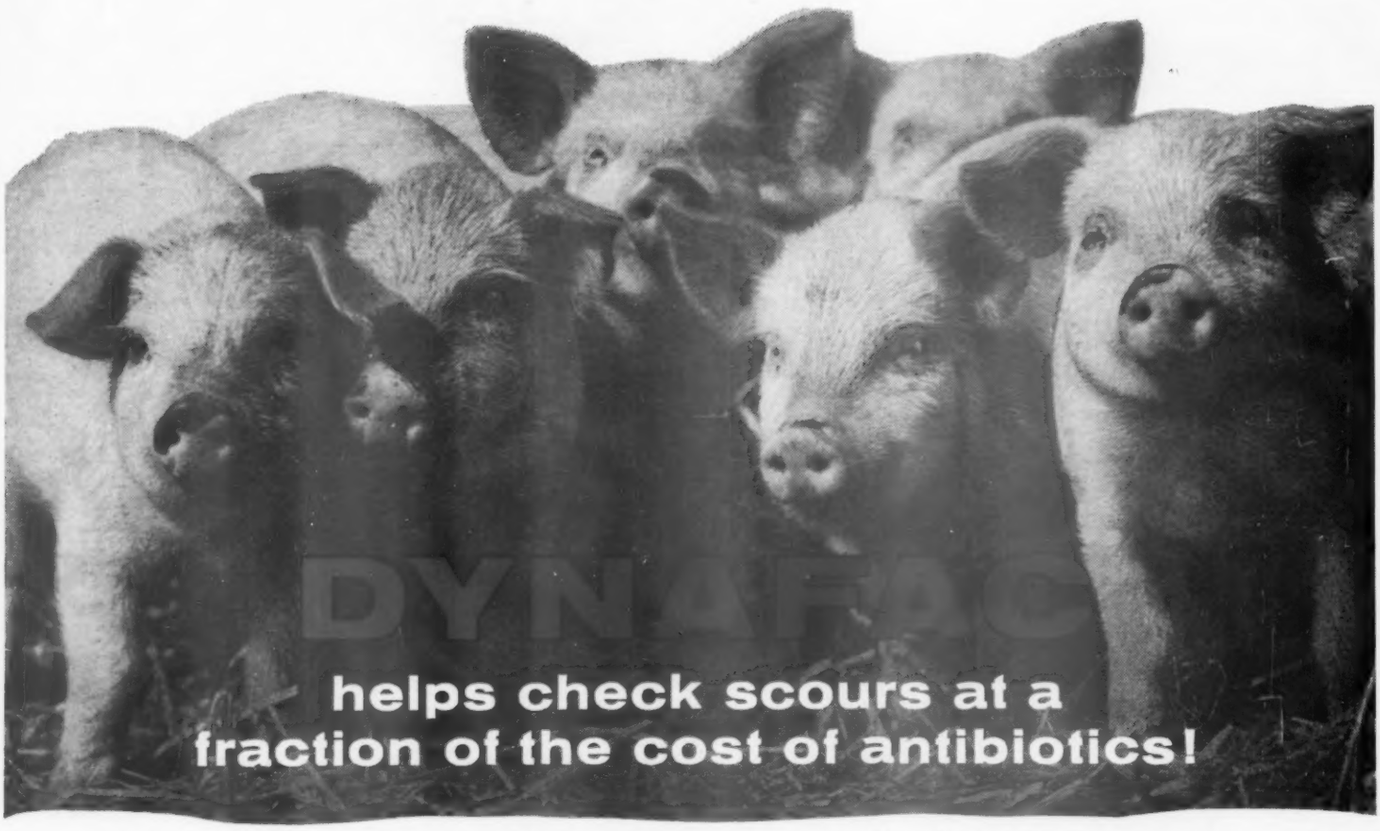

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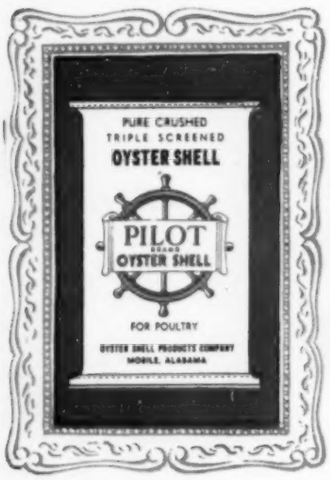

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fornia, Davis, and published in the 1959 10th edition of the Stockman's Handbook, Washington State University, under the title, "An Evaluation of the Use of Estrogens in Ruminant Growth."

"Comparisons were made as to the relative response-values of 12, 24, 15 and 30 mg. DES implants as well as various estrogen-steroid combinations, with and without DES feeds over a 120-day treatment period.

"The first trial reported an increased daily gain of 2.98 lb. on the combined DES treatment compared to 2.71 daily gain for DES fed animals. The second trial reported 3.34 lb. daily gain on the combined DES treatment compared to 2.92 lb. for the DES fed animals.

"There was no significant differences in growth response with the estrogen-steroid preparation under the same test conditions.

"The opinion was also expressed in the report that 30 mg. implants approached optimum growth response without appreciably reducing carcass composition and that higher implant dosages were no better than the optimum 30 mg. dose level.

"However, DES tissue residue studies were not included in this study, as well as previous preliminary trials, to establish safety of use under conditions of use to permit wide commercial application under FDA regulations."

Test Procedures

Sterol Derivatives pursued the following test procedures, as recommended by FDA, to establish safety:

1. Eighteen previously untreated beef animals were selected and divided into three test groups of six animals each. One group was used as the control unit; one group was fed 10 mg. of DES per head per day with a 30 mg. implant, and one group was implanted with 30 mg. DES.

2. Composite tissues (liver, muscle, fat, kidney, tripe-intestine) of each group were biologically assayed.

3. Statistical raw analysis of rat assay data showing no more than 2 p.p.b. (the so-called zero tolerance) was submitted.

4. The maximum treatment period for all groups was 90 days. The DES feed was withdrawn on the 88th day from the group on combination treatment.

The tissue residue study was started Dec. 23, 1960, and was completed March 22, 1961.

"Since January of this year," Discan's report continues, "more than 200,000 head in 14 selected large feedlots were finished on a practical scale with the combined DES treatment program. Higher weight gains with improved feed conversion were reported to be equivalent to the earlier preliminary and controlled trials, with an observable decline, or elimination, in the incidence of prolapse, riding and hightail."

The distributor and manufacturer of Dibestrol "C" say they do not, as yet, have reliable data for the combined treatment of beef animals being fattened to heavy weights over periods of 165 to 190 days or more, after DES feeds are withdrawn for a given period beyond 120-130 days. "We can assume, however, from other reported research that 15-30 mg. Dibestrol 'C' re-implant at 100 to 120 days, when DES feeds are withdrawn, may empirically be the time to carry the animals through 180-190 days on dry lot or pasture with satisfactory stilbestrol-stimulated gains," the Discan report states.

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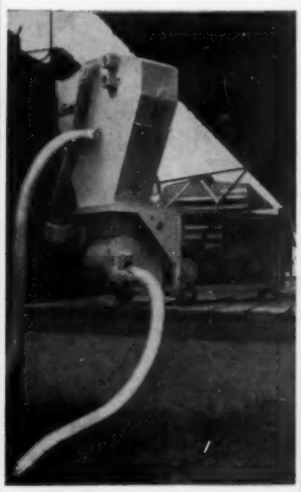

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Report Bloat Test; Enzyme Inhibition Suggested as Control

MADISON, WIS.—The rapid gas production and frothiness which sometimes make cows bloat after they eat fresh legumes is probably a simple acid-base reaction—not much different than when vinegar is added to baking soda, according to University of Wisconsin veterinary scientists. But, they say, it takes an additional reaction to cause real bloat trouble.

In reporting on bloat tests, the scientists say inhibition of an enzyme may be the best line of attack for bloat control. This would involve using a feed additive to reduce the activity of the enzyme, which aids in "jelling" of rumen fluid.

Dr. R. E. Nichols, Dr. Mark Stahmann, Jiban Gupta, M. H. Crump, Dawson Deese and Katherine Penn believe fresh legume plants supply the acid for the reactions; the base — bicarbonate — is dissolved in the fluid of the rumen, or cow's first stomach.

As digestion frees the acids from legumes, some of the acids combine with rumen carbonates to release carbon dioxide gas. The veterinarians' tests showed that readily soluble acids of legumes—malic, malonic, citric and succinic acids—cause a more rapid release of gas than less soluble acids such as pectic, polygalacturonic and galacturonic acids do. But these acids, too, play a crucial role in causing bloat.

Gas production is a normal occurrence in the rumen, and, in fact, is a necessary part of digestion. Gas would cause no difficulty unless something happened to keep the cow from getting rid of it.

By itself, the researchers emphasize, rapid gas production doesn't cause bloat. In fact, they have put large amounts of acid and base together in a cow—enough to produce upwards of 10 gal. of carbon dioxide gas. This gas didn't harm the cow because she could get rid of it.

Trapped Gas

But when the rumen contents become more viscous (thicker or more jelly-like) then gas bubbles are trapped in the rumen fluid. The rumen contents foam, and the cow can't belch to get rid of gas. Pressure builds up and can kill the animal.

The researchers' tests have also shown how this increased viscosity might come about from a chemical reaction of materials in fresh legumes and rumen fluid. This involves one of the slower gas-producing acids, pectic acid.

As the pectic materials of the plants are digested into pectic acid, another reaction with the dissolved carbonates takes place. This produces some more carbon dioxide gas. But more important is the other product produced in the reaction—a combination of calcium or sodium with the pectic acid.

This combination results in a "jelling" of the rumen fluid to make it more viscous. Pectin, in fact, is used by housewives to thicken fruit juices in making jelly. What happens to rumen fluid is much the same.

The digestion of pectin of the plant to pectic acid is accomplished by an enzyme called PME for short. Inhibiting this enzyme would presumably prevent the increase in rumen fluid viscosity and thus help prevent bloat.

Actually, the researchers found this could be part of the reason that feeding of detergents can ease a bloated cow. The type of detergent used in past research—alkyl aryl sulfonate—is a chemical inhibitor of PME.

Fresh young alfalfa—the kind that is most likely to cause bloat—seems to have a lot of this PME enzyme, the researchers report.

Enzyme Inhibition

PME inhibition is the best line of attack for future bloat control efforts, Dr. Nichols believes. This would involve using a feed additive to reduce the activity of this "jelling" enzyme. Also, there might be a chance to develop new legume varieties with low PME content, just as plant breeders are now getting Sudan grass with low prussic acid content.

Another enzyme, called pectinase, can digest pectic acid further—changing it to galacturonic acid. When this happens, viscosity of rumen juice returns to normal, Dr. Nichols' group found.

The researchers were able to decrease the viscosity of an experimentally jelled mixture by adding pectinase. But this doesn't work as a feed additive to prevent bloat. Dr. Nichols figures there's no shortage of pectinase in the cow's rumen; there's just too much PME and pectinase can't push the reaction along rapidly enough to prevent the PME from increasing the viscosity enough to cause trouble.

Dr. Nichols and his group have this picture of the bloating process:

A reaction between carbonates in the rumen and highly soluble acids from fresh legume plants causes a rapid production of carbon dioxide gas. At the same time, the less soluble pectic acid reacts with rumen fluids to increase rumen juice viscosity (and incidentally also produces some gas). The key to release of the pectic acid is an enzyme called pectin methylesterase, or PME.

These two reactions set the stage for trouble—a bloated cow that can't get rid of the gas produced in her paunch.

Profitable Northeast Poultry Industry Seen

SANBORNTON, N.H.—New England's poultry industry is certainly going to be profitable, but it will need capable farm managers, able to perform efficiently and take full advantage of well known methods, Ray Delano of Wirthmore Feeds, Inc., Waltham, Mass., declared at the two-day annual Agricultural Credit Workshop here.

He said plenty of credit will be needed to aid the poultry industry and will be well worth the consideration of any banker.

This is the second year that the New England farm credit bankers have conducted their annual fall workshop at the Sanbornton Inn, with key bankers from a six-state area in attendance. During the event, they took a glimpse into the future of loose housing, poultry credit needs and farm machinery.

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High-Grain Rations for Pregnant Ewes

By Dr. R. M. Jordan
University of Minnesota

Good quality roughage is the basis of most wintering rations for beef cattle and sheep. In general, a conventional wintering ration for pregnant ewes is 3 to 4 lb. of hay per ewe daily. In addition, most good operators feed ½ to ¾ lb. grain or mixed concentrates per ewe daily during the last four to six weeks of the gestation period. With hay in short supply in many areas hit by drouth during 1961, it is only logical for sheep operators to wonder whether their stock could be wintered over in satisfactory health if the animal's nutrient requirements were met with something other than hay. Based on experiments conducted with pregnant ewes during the last two years, it appears that grain can be substituted for a large part of the hay with no loss in production and perhaps at considerable saving in transportation and labor costs.

Following the breeding season, grade Rambouillet ewes were sorted into three lots of 12 ewes each and fed as follows: Lot 1. A conventional roughage ration consisting of 4 lb. of alfalfa-brome grass hay was fed per ewe daily during the first 56 days. During the last 28 days of the feeding period, 0.5 lb. shelled corn per ewe daily was added to the ration. Lot 2. Each ewe received daily 2 lb. of a ration consisting of 1 lb. of shelled corn and 1 lb. of alfalfa-brome grass hay. During the last 28 days of the experimental period an additional 1 lb. of hay was fed per ewe daily. Lot 3. Each ewe was fed 2 lb. of a ration consisting of 1.5 lb. of shelled corn and 0.5 lb. of alfalfa-brome grass hay. During the last 28 days of the experimental period, an additional 1 lb. of alfalfa-brome grass hay was fed per ewe daily.

Housing Described

Trace mineralized salt and fresh water were available, and the ewes were housed in a shed that was open to the south. No bedding was used so as to eliminate the possibility of the ewes eating it. One week before the ewes were due to lamb the feeding of experimental rations was discontinued.

During the course of the experiment it was found that even though the ewes weighed in excess of 140 lb., they did not consume 4 lb. of hay per ewe daily. This was true particularly during the period when half a pound of corn was fed. Therefore, the total pounds of feed fed each ewe in lots 2 and 3 is not exactly one half as much as was fed to each ewe in Lot 1. The daily nutrient requirements for a 140 lb. pregnant ewe as recommended in the National Research Council Bulletin No. 504 are:

	Total protein	TDN	Carotene
140 lb. ewe	.27 lb.	1.7 lb.	2.4 mg.

The three experimental rations supplied the following estimated nutrient levels:

4 lb. alfalfa-brome hay	.60	2.0	32
1 lb. alfalfa-brome hay, 1 lb. shelled corn ..	.22	1.3	8
½ lb. hay, 1½ lb. shelled corn	.20	1.4	4

Based on the above calculated nutrient levels for the rations fed, it is evident that 4 lb. of alfalfa-brome hay more than met the requirements of a 140-lb. ewe and that the relatively high grain rations were somewhat low in both protein and TDN.

The results of two years' work are presented in Table 1. Based on weight gain of the ewes, which is the most sensitive criterion, though perhaps not the most important measurement obtained, the ration consisting of equal parts of corn and hay produced the same amount of weight gain as the conventional ration of hay only. Equally interesting is the fact that 2 lb. of a ration consisting of 75% grain and 25% hay produced decidedly more weight gains than either of the other two rations compared.

No Appreciable Differences

The rations fed produced no appreciable differences in fleece weight or lamb birth weight. All lambs were strong at birth and no more parturition difficulties occurred among the ewes on one ration than on another. There was no discernible difference in milking ability of the ewes fed the different rations.

Good quality roughage is a nutritious, and very often an inexpensive, ration but apparently ruminants can thrive on far less roughage and more grain than has been recommended in the past. The decision as to whether to feed more grain and less roughage should be dictated by relative cost of hay and grain.

If we assume that alfalfa-brome hay is selling for $20 a ton and shelled corn for $40 a ton, we can calculate the cost of wintering these ewes during this experimental period. In Lot 1, ewes fed hay primarily ate 319 lb. of hay and 14 lb. of corn at a cost of $3.38 per ewe. Ewes in Lot 2 (half-hay, half-corn ration) ate 112 lb. of hay and 84 lb. of shelled corn at a cost of $2.80 per ewe. Lot 3 ewes fed the ration consisting of 75% shelled corn and 25% hay consumed 125 lb. shelled corn and 70 lb. of hay at a cost of $3.20 per ewe.

Since the grain-hay rations provided less nutrients per ewe than the

EDITOR'S NOTE: The accompanying article by Dr. R. M. Jordan, associate professor in the department of animal husbandry, University of Minnesota, St. Paul, is Paper No. 1091, Miscellaneous Journal Series of the Minnesota Agricultural Experiment Station, St. Paul, Minn. Although the research reported here was with sheep, it is believed that the findings would apply equally well to cattle. This is particularly true in view of the use of high-concentrate rations for fattening cattle.

TABLE 1. Effect of Substituting Corn for Hay in Pregnant Ewe Rations

Treatments*	Hay	Hay-grain 50:50	Hay-grain 25:75
Items / Lot No.	1	2	3
No. ewes	22	22	22
Days fed	84	84	84
Initial weight, lb.	145.2	142.5	143.1
Average gain, lb.	18.3	18.1	27.3
Total feed fed per ewe, lb.			
Hay	310	112	70
Shelled corn	14	84	126
Daily feed fed, lb.			
Hay	3.70	1.33	.83
Shelled corn	.17	1.00	1.50
Average fleece wt., lb.	10.1	10.0	9.8
Lambing, %†	135	143	154
Dry ewes	2	1	0
Average birth weight of lambs, lb.	10.9	10.5	11.0

*Alfalfa-brome grass hay of good quality.
†Based on ewes lambing.

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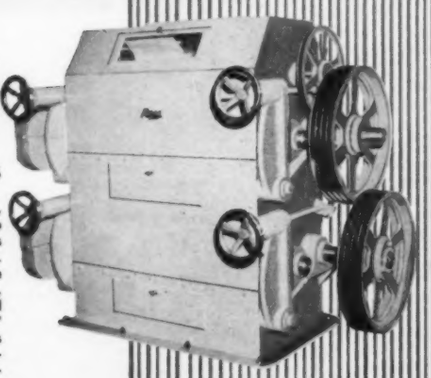

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hay ration, it is apparent the ewes were able to utilize a higher per cent of the nutrients in the high-grain rations than they were in the roughage rations. The ewes on the high-grain ration had a craving for additional roughage as they consumed all the hay with absolutely no waste. Nevertheless, while hay as such may satisfy a ewe's craving for roughage, it takes about twice as many pounds of hay to provide the same amount of TDN as is provided in the grain-hay ration. (Compare weight gains in lots 1 and 2.)

Conclusions

We conclude from this experiment that in areas where hay is in short supply and high in price or where grain is no more than twice as high per pound as hay, sheepmen should consider feeding limited amounts of hay and more grain to pregnant ewes.

Society of Animal Production Elects, Votes to Change Name

CHICAGO—The American Society of Animal Production, at its 53rd annual meeting, held in Chicago, elected officers, presented awards and voted to change its name.

The name was changed effective immediately to the American Society of Animal Science.

Elected were: Dr. T. J. Cunha, University of Florida, Gainesville, president; Dr. L. E. Hanson, University of Minnesota, St. Paul, vice president, and C. E. Terrill, agricultural research center, Beltsville, Md., re-elected secretary-treasurer.

Recipients of the four annual distinguished service awards were: The Morrison award, Dr. Frederick N. Andrews, Purdue University, Lafayette, Ind.; American Feed Manufacturers Assn. award, Dr. James H. Meyer, University of California, Davis; American Society of Animal Production extension award sponsored by Chas. Pfizer & Co., Henry P. Holzman, South Dakota State College, College Station, and the American Society of Animal Production distinguished teacher award sponsored by Swift & Co., Victor A. Rice, retired as dean, school of agriculture, University of Massachusetts, Amherst, presently acting director of instruction, University of North Carolina, Raleigh.

Receiving the society fellow awards were: Mr. Holzman, South Dakota State; Thomas H. Jukes, Lederle Laboratories, American Cyanamid Co.; Luther A. Weaver, University of Missouri, Columbia; Leonard A. Maynard, U.S. nutrition laboratory; Marvel L. Baker, University of Nebraska, Lincoln; John B. Francioni, Jr., Louisiana State University, Baton Rouge; Paul H. Phillips, University of Wisconsin, Madison, and Alfred L. Harvey, University of Minnesota.

The American Society of Animal Production has 2,143 members in the U.S. and Canada and 231 from countries outside the North American continent.

Midwest Bag Marks 30th Anniversary

DES MOINES—The 30th anniversary of the founding of Midwest Bag Co., here, was observed with an open house for over 400 persons on the eve of the opening session of the Western Grain & Feed Association of Iowa convention here.

The firm pointed out that the open house Nov. 19 was held 30 years to-the-day after the founding.

President Harry Pomerantz traced the history of the firm, pointing out that in 1950 the firm added new textile burlap and cotton to its reprocessing bag line and in 1958 added multi-wall paper bags. He said the firm is presently obtaining polyethylene bag manufacturing equipment and plans to incorporate an in-line corrugated box operation in 1962.

Opposition to Orders Voiced in Indiana

INDIANAPOLIS—Directors of the turkey department, Indiana State Poultry Assn., have passed a resolution unanimously opposing proposed turkey marketing orders.

A special directors' meeting was called following a series of three public educational meetings to explain the proposed orders for turkeys and turkey hatching eggs which were conducted in three Indiana cities.

Producers who raised approximately 90% of the turkeys in Indiana this year were represented at the meetings, an association news release stated. The stand in opposition to orders was taken "after careful consideration of the reaction of those attending the area educational meetings . . . and after detailed study of the marketing orders," the resolution stated.

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Putting Research To Work

BY SPENCER H. MORRISON, PH.D., D. V. M.

Magnesium Requirement of the Young Chick Determined with a 'Magnesium-Free' Diet

● G. W. McWard and H. M. Scott, Illinois Agricultural Experiment Station, Poultry Science, Vol. 40, No. 5, pp. 1174-1176, September, 1961.

ABSTRACT AND COMMENT

Quite a bit of work has been conducted in the past with both semi-purified and practical diets to ascertain the true magnesium (Mg) requirements of chicks. (Among the more important papers are: Almquist, 1942; Snyder, 1954; Scott et al, 1956; Moeller, 1959; and Gardiner et al, 1959.) The earlier work indicated that the Mg requirement was in the neighborhood of 400 ppm for optimum growth and survival. Most of the later research dropped this requirement to about 250 ppm with one exception (100 ppm).

Illinois workers used an essentially "free Mg" diet to help clarify the requirement of the chick for this element. This was done because diets previously used contained more than 75 ppm total of Mg from ingredient sources. The salt mixture which was used at the level of 4.233% of the diet in the Illinois work was found on chemical analysis to contain only 0.7 ppm of Mg. The isolated soy protein (used at 35.3% of the total diet) was washed several times to remove all of the Mg. Other ingredients were free of Mg. Distilled water was used as the drinking water.

Three separate trials were conducted using three replicates of 10 male chicks (New Hampshire X Columbian) each in experiments 1 and 2, and five replicates in experiment 3 of 10 chicks each. The duration of the assay period was 1 to 14 days of age. The various levels of supplementary magnesium varied from 0 to over 450 ppm.

It was demonstrated quickly in experiment 1 that the level of Mg required to prevent excessive mortality lay between 150 and 225 ppm of the diet. Therefore, the last two trials were conducted with the purpose of defining the requirement more critically. As a result of the three trials, it was concluded that the chick's requirement for Mg in terms of growth and survival was approximately 200 ppm.

It should be pointed out most common feed ingredients contain about 0.1% Mg, and some contain as much as 0.3% Mg or more. The latest NRC report of the Subcommittee on Poultry Nutrition (1960) lists the Magnesium "requirement" of starting chicks as 220 mg./lb. of feed. This is equivalent to approximately 0.049% of the diet. A magnesium requirement of 200 ppm as determined by experimentation would be equivalent to 0.02% of the diet. Thus, it becomes obvious that under practical conditions we would likely be unconcerned about meeting the magnesium requirements of chicks.

On the other hand, some consideration probably should be given to several other factors before arriving at a final conclusion. Some evidence indicates that if an antibiotic is not included in the diet the Mg requirement is raised slightly (Supplee, 1960). Work with rats has demonstrated that low environmental temperatures (55° F.) resulted in a Mg requirement four times that when the temperature was higher (78° F.). Also, high calcium diets were detrimental to growth when low Mg levels were used and accentuated cold injury (Hegsted et al, 1956).

Furthermore, it is conceivable that with the use of high-energy diets as used in practical operations, the requirement for Mg may be higher than that obtained using purified or semi-purified types of diets. Possible verification of this fact is seen from the results of a recent experiment from the University of Georgia (Edwards et at, 1960). The supplemental Mg requirement was determined to be about 100 ppm with low energy diets and about 150 ppm with high energy diets in a clean environment. But, in a contaminated environment, at least 200 ppm of Mg was needed.

Little work has been done on the Mg requirements of young turkeys, but one report has appeared recently from Maryland (Supplee, 1960). Here, with Beltsville White turkeys, the poult requirement was estimated to be in the range of 270-320 ppm of Mg. In other work, Mg levels up to 1,700 ppm were fed with no toxic effect. In trials at Purdue with chicks, no adverse effects were found from feeding Mg levels as high as 4,058 ppm of Mg (1960).

Although little is known about the actual requirements of Mg for laying hens, two interesting trials are worthy of mention. The first from the Halloran Research Farm, Modesto, Cal. (1961), demonstrated that supplementary addition of Mg of 110-220 mg./lb. of diet not only improved feed efficiency and egg production but also aided in preventing cannibalism in debeaked birds. The basal rations used calculated approximately 1,000 mg. per pound of diet. The au-

thors made the following pertinent comments:

"1. Magnesium levels of feedstuffs used are substantially less than theoretical values.

"2. Low availability of the magnesium present in feedstuffs.

"3. High magnesium requirement for hens."

But, we cannot ignore the fact that it is possible to feed laying hens too much Mg. Creek of Maryland (1961) has reported that field cases of rickets have been reported recently in poultry when manufacturers have used limestone containing a high amount of Mg. In laying hens, soft egg shells can result with too high levels of Mg. Thus, the feed manufacturer who is adding high levels of Ca in an attempt to improve egg shells may actually be defeating his purpose if high Mg limestone is used. It is best, therefore, to use limestone with a high calcium carbonate and low magnesium carbonate content for feeds.

Ronnel Cleared for Dairy Heifer Feed

WASHINGTON — The U.S. Food and Drug Administration has cleared use of the food additive ronnel in dairy heifer feed for control of grubs as petitioned by the Dow Chemical Co., Midland, Mich.

The systemic insecticide had previously been cleared for use in beef cattle feed. It has also been cleared for use at higher levels than approved before.

The order clearing ronnel placed limitations which are apparent from the required precautionary labeling prescribed for the medicated feeds. Required statements are: The feed is to be fed only for the control of cattle grubs; it is not to be fed to dairy animals other than heifers, and it should be discontinued in heifers 60 days before calving; it is to be withdrawn 60 days before slaughter; it should be discontinued after either seven or 14 days, whichever is appropriate; the balance of the daily ration should not include ronnel-medicated feed, and the medicated feed should be thoroughly mixed with the daily ration.

The 14-day feeding time was set for levels of ronnel of 2,600-2,750 ppm. in a concentrate to be fed at the rate of 0.3 lb. per 100 lb. of animal weight per day. The seven-day limit was set for ronnel at a level of 6,000 ppm. in a concentrate to be fed at a rate of 0.3 lb. per 100 lb. of animal weight.

FDA set a zero tolerance for ronnel residues in milk.

THREE BUILDINGS BURN

PANDORA, OHIO—A $90,000 fire destroyed three connecting buildings of the Kempf Feed & Grain Co. here. Feed, stored grain and machinery for feed grinding and mixing were destroyed. Mrs. Virginia Kempf is president of the firm.

NBC Officials Meet Supermarket Brass

RICHMOND, VA.—National Broiler Council officials have concluded a coast-to-coast trip holding a series of conferences with top executives of four national supermarket organizations.

Purpose of the trip by four of its officials was to report to retailers on the present broiler situation and to discuss how it affects current merchandising practices, says NBC, which is headquartered here.

NBC President Joe Frank Sanderson, Laurel, Miss., indicated that the meetings with presidents, vice presidents and meat operation heads were, without exception, productive—bringing about a realization that the supermarket industry and the broiler industry have common problems which need the combined effort of both groups to be solved successfully.

Arranged in cooperation with the National Association of Food Chains, the conferences were held with American Stores, Grand Union, Kroger and Safeway. These were chosen as typical of the retail food industry, the council said. NBC will continue these conferences with retailers and is now setting up additional appointments, it was pointed out.

Top Level Communications

"Through these conferences we were able to establish better communications at the top policy level," Mr. Sanderson said. "Thus with the retailers having more information on the production side, they can better plan their merchandising programs."

NBC Vice President Harold Snyder, Dardanelle, Ark., re-emphasized the progress made communications-wise with the retailer executives and went on to state, "With the proper follow-up work through NBC, we should be able to launch more effective merchandising efforts. These meetings have proven we have real partners who are anxious to help."

John Hargreaves, NBC director, Federalsburg, Md., commented, "By pulling together the thinking of the retail and the broiler industries, I feel nothing but good can come from these conferences. They point up the fact that we do have common objectives and from this grows a willingness to better understand each other's problems and work toward their solution. This is especially true with trading methods to enable the broiler industry to more accurately gear production to demand."

The retail executives were all reported to be in accord that the broiler industry, through NBC, has taken the right approach in these conferences and, individually, indicated they would intensify their week-in and week-out merchandising efforts.

Frank Frazier, NBC vice president, completed the NBC delegation representing the broiler industry at these meetings.

Mill Improvements

SANTA ROSA, CAL.—Albers Milling Co. is making extensive improvements at its Santa Rosa mill. The improvements include two large new batch mixers, push-button mixing arrangements and additional storage facilities.

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Nutritional Factors Affecting Egg Quality Outlined at Manitoba Poultry Conference

WINNIPEG—"Nutritional Factors Affecting Egg Quality" were discussed in a recent speech at the Manitoba Poultry Conference by Dr. I. R. Sparling, director of nutrition, Maple Leaf Mills, Ltd., Toronto.

"Fortunately, there are not too many nutritional factors responsible for affecting egg quality," Dr. Sparling told those attending the conference, which was sponsored by the University of Manitoba and the Manitoba division of the Canadian Feed Manufacturers Assn.

"There is, however, evidence that the hen's diet may affect egg size, shell quality, albumen quality, yolk color, the incidence of blood spots, egg flavor and food value."

Dr. Sparling outlined the effects on quality in these various areas:

FOOD VALUE—"The level of vitamins (A, D and B vitamins, etc.) in the egg may be affected by the level in the hen's diet. However, it may be considered that all commercial diets are adequate in this regard."

EGG SIZE—"It has been known for many years that the level of protein in the laying ration influences egg size.

"The National Research Council and others recommend a level of 15-16% protein. A lower protein content is not adequate to maintain egg weight when relatively high energy diets are fed—900 calories and up of productive energy. Therefore, a calorie-protein ratio of approximately 1:55 is required.

"It is also interesting to note that the protein requirement for maximum egg weight is higher than for maximum egg production.

"The quality of the protein or amino acid balance also reflects the percentage of protein required for good egg size. Slinger, O.A.C., reports that with a 15% all vegetable protein diet, egg size will be increased by the addition of methionine.

"Temperature affects the protein requirement. In warm weather or southern climate the hen consumes less feed to meet her energy requirements, therefore, the proteins as well as other nutrients should increase proportionately. This adjustment is practiced in areas of high temperatures.

"It has been reported that corn, soybean oil meal, and to a lesser extent, barley, contain an unidentified factor necessary for maximum egg weight and egg production."

EGG SHELL QUALITY—"Maintaining shell quality, always a major concern, has become even more serious with present day high production strains of birds maintained and fed for high production over a longer period of lay. Five per cent cracks represent 1 doz. cracks, or approximately 25¢ loss in profit per hen during her laying year.

"There are two distinct factors involved in shell quality, namely shell porosity and shell thickness, and there is little or no correlation between the two measurements. Porosity does not appear to be readily influenced by dietary factors.

"Shell thickness, which is fairly well correlated with shell weight and specific gravity of the egg, is of interest from the economic point of view of egg breakage, and can be markedly influenced by diet.

"Such factors as calcium, phosphorus, vitamin D, manganese, vitamin C, zinc and antibiotics have been reported to influence and improve shell thickness.

"The NRC recommended level of calcium (2.25%) is not always high enough for maximum shell quality. It is satisfactory for shell strength with a pullet flock in early production. However, with a flock in the latter part of the laying year and, particularly in warm weather, it is advantageous to supply calcium levels up to 5% for maximum shell strength. Furthermore, it is necessary to supply all or the most part of this calcium in the laying ration (the hen will not eat enough oyster shell or other source of calcium free choice), for maximum shell thickness and strength.

"Higher levels of calcium have been fed above 5% without any further improvement in shell strength. It does, however, increase the amount of stress on the digestive tract and will begin to retard egg production and lower the flock health.

"Increasing the vitamin D above the NRC recommendations seems to be of some value and should aid in calcium assimilation.

"Similarly, increasing the phosphorus and manganese may assist in improving shell strength.

"The addition of vitamin C to improve shell strength may be of value. However, the experimental reports are somewhat conflicting and not consistent.

"Similarly, the value of adding zinc to improve shell strength is not too clear cut. However, the cost is very small and it probably should be included for good measure.

"The addition of antibiotics will often improve shell strength under certain conditions. If the flock health is not satisfactory, calcium will not be utilized and efficiently assimilated. The feeding of antibiotic for a period of time will frequently stimulate the flock, improve health and indirectly improve shell strength.

"Calcium gluconate included in the laying ration has been shown to improve shell quality over and above the benefit obtained with 5% calcium, under some conditions.

"Sulfa drugs have been reported to interfere with proper shell formulation. Also, treatment of seed grain with arasan has produced soft shelled eggs."

ALBUMEN QUALITY—"High energy diets have been on occasion held responsible for lowering the Haugh unit value. However, there is ample evidence in the literature to indicate that the energy content of the diet has little or no effect on albumen quality.

"In reality, the high energy diet invariably increases the rate of lay and the additional eggs laid have been responsible for lowering the Haugh unit value. Comparing the Haugh unit value after a given number of eggs had been laid, on both

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high and low energy rations would not reveal any difference in the Haugh unit value.

"Yolk color and yolk visibility upon candling are closely correlated. Since yolk outline is one of the factors used to determine candled grade it follows that when diets produce dark yolks that are plainly visible it is then assumed that a thin white exists resulting in a high percentage of eggs graded B quality. Invariably, when the ration is altered to produce lighter colored yolks, the albumen is considered satisfactory and a higher percentage of grade A eggs is obtained.

"It has been reported that eggs from rations containing a greater percentage of barley, oats and meat meal receive a higher Haugh unit score than corn-soybean oil meal; corn-meat meal or barley-oats-soya rations.

"Excess additions of calcium to improve shell quality have been reported to have a moderately adverse effect on egg albumen as measured by Haugh unit value.

"Fly bait diazinon and arasan treated grain accidentally included in the feed have been found to cause thin albumen."

YOLK COLOR—"It is well established that yolk color is governed by the xanthophyll content and its biological availability in the feed.

"Dehydrated green feed, yellow corn and corn gluten are the important sources of xanthophyll for practical rations. Care must be exercised in the quantity of these ingredients in the ration to prevent the downgrading of eggs on some markets that require a light yolk.

"A very light pale yolk may also not be acceptable to some customers. A light colored yolk does not necessarily indicate a lack of vitamin A because this vitamin is now largely supplied in a synthetic stabilized form without need for green feed as the source, in a ration."

MOTTLED YOLK — "This condition may be found in fresh eggs, but is more common in eggs held for several days, particularly without adequate refrigeration.

"Mottling is apparently caused by egg albumen moving through the vitellin membrane into the yolk. The coccidiostat nicarbazin in the laying ration at levels above .005% will produce mottled yolks. Phenothiazine has been reported to produce mottled yolks."

BLOOD SPOTS—"Blood spots result from the rupture of a small blood vessel in the follicle within which the yolk or ovum develops while still attached to the ovary. Others occur in the upper part of the oviduct.

"Meat spots, formerly considered to consist of blood spots in various stages of degeneration, have now been demonstrated to be separate entities. Blood spots are somewhat seasonal, usually reaching a peak about April.

"Vitamin A has been demonstrated as a factor. The incidence of blood spots is increased when the ration contains less than 1,000 units per pound. The NRC recommendation is 2,000 USP units per pound.

"High levels of vitamin A have proven beneficial in correcting or alleviating the problem. Dehydrated green feed in the rations has been shown to decrease the percentage of blood spots.

"Many of the older poultrymen will recall from the past that the high spring incidence of blood spots would automatically correct itself when weather permitted letting the flock outside.

"The intensity and persistency of lay appears to have little effect o the incidence of blood spots.

"Although I am not aware of any good experimental evidence that vitamin K will assist in decreasing blood spots, I do think it advisable to include vitamin K in the laying ration formula as a possible aid in decreasing blood spots.

"Furthermore, experimental work with reserpine to lower blood pressure may be worthy of consideration in an attempt to decrease the incidence of blood spots when confronted with a problem flock.

"Eggs with fishy flavor and off odors have been reported—usually these eggs are from individual hens.

"A recent report from British Columbia in respect to fishy-flavored eggs was traced to an excessive and abnormally high level of fish meal in the laying ration.

"Briefly, these are the nutritional factors that have been reported to affect egg quality."

Feed Sales Volume of Maple Leaf Up Slightly

TORONTO—Increased sales of formula feeds during the last half of the fiscal year ended July 31 brought the over-all sales slightly over the volume of the year 1959-60, shareholders of Maple Leaf Mills, Ltd., were told in the company's report to shareholders.

The present trend, the report states, for more and larger integrated operations in the production of turkeys and chicken broilers in many parts of Canada has created substantial over-production, bringing extremely low prices for these products.

"It would be normal to anticipate some levelling off of production in the larger areas of poultry production, and this may have an adverse effect on turkey and broiler feed sales during the coming year."

It was pointed out that crop conditions in western Canada have been the cause of considerable increase in the price of feeding grains, and "the abnormally high cost of protein ingredients has added to the cost of formulated feeds, which will result in higher production costs for the farmers who are being 'squeezed' between low prices for the products and high production costs."

The company reported the new feed mill at Ste. Foy, just outside Quebec City, is greatly adding to facilities for distribution of bulk feeds in an important feeding area, and will help to give improved service to customers.

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By Dr. W. E. Dinusson, D. O. Erickson, C. N. Haugse and M. L. Buchanan
North Dakota State University

Steer feeding to finished grades, using North Dakota grown feedstuffs, is developing into a farm enterprise of major interest in North Dakota.

To find the most efficient and profitable combination of feeds, feed processes and management methods to bring native steers to top market finished grades, an experimental project was initiated by the animal husbandry department at Fargo in 1960. Since the experiment will take several years to complete, progress reports are being issued periodically so that information obtained from each of several phases of the experiment may be available immediately to interested persons.

A progress report in Farm Research summarized the results of phase 1, the wintering phase, of this experiment. To accommodate the reader, a brief summary of phase 1 will be repeated here.

The object of phase 1 was to get comparisons on alfalfa when fed in three physical forms — pelleted, chopped and long — for wintering calves. In the fall of 1959 alfalfa hay was in short supply, and the only hay available in sufficient quantity had been damaged by rain during hay making. A suitable quantity of this hay was obtained from one field; one-third was pelleted; one-third was chopped, and one-third was left in the bale. This was poor hay and somewhat musty and moldy but analyzed slightly over 15% crude protein.

EXPERIMENT C-3—PHASE 1—WINTERING — Thirty-six Hereford steer calves were allotted randomly into six lots on basis of weight groups. Two initial weight groups were on each treatment. The first three lots averaged about 425 lb., and the replicate lots averaged 355 lb. in initial weights. Each physical form of the hay was fed to two lots in amounts the steers would consume.

Rolled oats were to be fed to the slower gaining lots in each replicate in an effort to keep all lots gaining alike. A mineral supplement of equal parts of dicalcium phosphate and trace mineral salt was fed free-choice to all lots. Weights and feed records were taken every two weeks. The gain per lot of the previous two weeks was used as a base for the amount of rolled oats fed.

PELLETED — CHOPPED — LONG HAY FOR WINTERING — Table 1 summarizes the pertinent results of the 128-day wintering phase. There were no significant differences in gain between replicates (different initial weight groups) so the two lots on each treatment were combined, and the averages are given in Table 1.

The steers receiving the pelleted hay gained significantly (P=0.05) faster than those on the other two forms of the hay. (1.60 compared with 1.33 or 1.38 lb. per day). These pellet fed lots also ate far more hay per day than the other lots, in fact over 50% more (15.36 lb. compared with 9.13 and 9.81 lb.).

Actually, because of the poor quality of the hay, these values are "offered" rather than "consumed" because it was impossible to weigh back the hay refused. There appeared to be no refusal of the pelleted hay. The steers on the pellets were eating over

EDITOR'S NOTE: The accompanying article from the bi-monthly bulletin North Dakota Farm Research for November-December, sums up progress on five phases of steer feeding trials now underway at the North Dakota Agricultural Experiment Station, Fargo, N.D. Dr. Dinusson is animal nutritionist; Mr. Erickson is assistant in animal husbandry; Mr. Haugse is assistant animal husbandman, and Mr. Buchanan is chief of the division of animal industry and animal husbandman.

TABLE 1. Experiment C-3—Physical Form of Roughage and Gains

Hay form	Pellet	Chopped	Long
Lots	1 & 4	2 & 5	3 & 6
Steers, No.	12	12	12
Initial weight, lb.	390	391	391
Final weight, lb.	594	561	568
Average daily gain, lb.	1.60	1.33	1.38
Feed/lb. gain, lb.			
Hay	9.62	6.88	7.12
Oats	...	3.10	3.02
Total	9.62	9.98	10.14
Feed/day, lb.			
Hay	15.36	9.13	9.81
Oats	...	4.10	4.16
Mineral	0.02	0.02	0.01
Total	15.38	13.25	13.98

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20 lb. of hay pellets per day towards the latter part of the experiment, almost twice that consumed by the other lots.

The four lots fed oats never did gain as rapidly as those on the pellets. In an effort to keep the gains alike, as much as 5 lb. of oats were fed per head per day. With each increase in amounts of oats fed, less hay was eaten. Toward the latter half of the trial, the oats were limited to 4 lb. per head daily. This made an average intake of just over 4 lb. per head daily for the 128 days. The feed efficiencies were good, considering the quality of the hay.

It was worth noting that at the close of this phase of the experiment the steers on pellets, having gained an average of 1.60 lb. per day for 128 days, did not show any finish but were big-middled, growthy steers. The steers getting oats showed more bloom and condition but did not have the growthiness of the pellet fed steers.

After the close of the 128-day wintering phase all the steers were given a short conditioning period and all were fed the same ration of alfalfa hay, rolled oats and barley and supplement. This was done to accustom the pellet fed steers to grain so they would go on feed with the other cattle. All lots lost weight during this changeover period.

EXPERIMENT C-4—PHASE 2—FATTENING—To continue with this experiment the cattle were re-allotted at random within replicates in a manner that steers from each of the previous treatments were represented in the new treatments for the fattening phase. By use of this experimental design any effect of previous treatment on subsequent gain could be measured. In addition, half of the steers in each lot were implanted with a 36 mgm. stilbestrol peliet. Three rations were compared in the fattening phase: (1) steam-rolled barley plus supplement, (2) dry-rolled barley plus hay, plus supplement and (3) dry-rolled barley plus supplement. The supplement formula is given in Table 2.

The hay used in this experiment (treatment 2) was alfalfa-brome of good quality, analyzing 11.3% on a 90% dry matter basis. To call these "hay fed lots" might be confusing. All lots were given a minimum amount of hay while getting the steers on full feed. Two lots (lots 2 and 5) continued to be fed hay at the rate of 1 lb. per head per day.

TABLE 2. Experiment C-4—Formula for Supplement

Ingredient	lb.
Beet pulp with molasses	40
Soybean oil meal (41%)	35
Dehydrated alfalfa	10
Dicalcium phosphate	6.25
Trace mineral salt	8.75
Urea (26%)	0.5
Vitamins A & D	yes
Per cent protein (analyzed)	22.3

The barley used weighed about 44 lb. per bushel. The steam-rolled barley was not rolled as thin and flaky as usual for steam-rolled barley. The dry-rolled barley was from the same source as that steam-rolled and was reasonably well rolled, although for a part of the period showed more "fines" than desirable. Two lots of six steers each were used per treatment.

Weights and feed records were kept on 21-day intervals. The summary of results of the 168-day fattening phase is given in Table 3. There were no differences between replicates so the results of the two lots per treatment were averaged for presentation in this table.

STEAM ROLLING VS. DRY ROLLING—In comparisons of steam with dry-rolled barley (lots 1 and 4 with lots 3 and 6) there were no real differences in gains of the steers. One steer in lot 6 was unthrifty and gained only 1.38 lb. per day. His performance could not be considered due to treatment since the other 11 steers on the same treatment averaged 2.28

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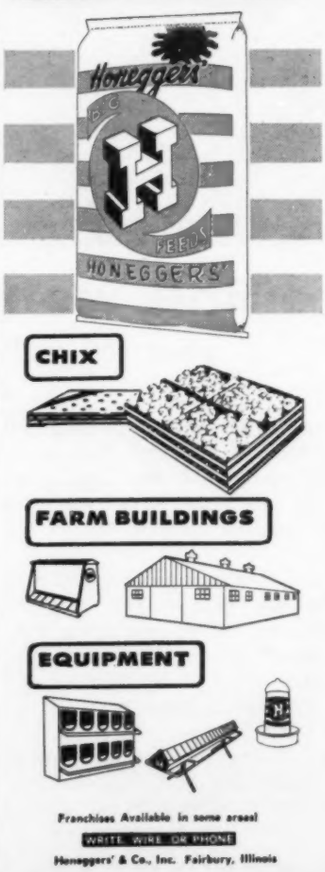

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TABLE 3. Experiment C-4—Summary of 168-Day Fattening Phase

Treatment Lots	Steam-rolled barley, no hay 1 & 4	Dry-rolled barley and hay 2 & 5	Dry-rolled barley, no hay 3 & 6
No. steers	12	12	12
Initial wt., lb.	569	567	564
Final wt., lb.	957	972	935* (953)
Average daily gain, lb.	2.31	2.41	2.20*(2.28)
Feed/lb. gain, lb.			
Hay	0.16	0.55	0.15
Grain	6.78	6.46	6.69
Supplement	0.43	0.41	0.45
Total	7.37	7.42	7.29
Feed/day, lb.			
Hay	0.37	1.31	0.32
Grain	15.66	15.58	14.75
Supplement	1.00	1.00	1.00
Total	17.03	17.89	16.07

*One steer in Lot 6 gained only 1.38 lb. per day. The figures in parentheses are the average for the other 11 steers.

lb. per day. Thus, the gains of the two treatments were 2.31 and 2.28 lb. per day with feed efficiency slightly in favor of the dry-rolled barley groups. The cost of gain was slightly in favor of the dry-rolled groups, primarily because of the additional $2 a ton charge for steam-rolling.

LIMITED AND NO HAY COMPARED—In comparing the value of the limited amount of hay with no hay for fattening steers on rolled-barley, the steers receiving the extra hay appeared to gain a bit faster (2.41 compared with 2.28 lb. per day). However, analysis of variance showed no significant differences in rate of gain between lots. That is, there was as much variation in the gains within a lot or treatment as between lots or treatments. The extra tenth of a pound per day average gain of the hay lots was probably due to chance. The steers receiving hay ate more feed per day, but this is probably a reflection of the poor performance of the steer in lot 6 which did not eat his fair share nor did he gain as the other steers did on the treatment.

EFFECT OF STILBESTROL—Stilbestrol was implanted in half of the steers in each lot at the first weigh period, 21 days, after starting the cattle on full feed. The dosage level was 36 mgm. per head implanted in the ear. This treatment resulted in a 26.5% average increase (2.58 lb. compared with 2.04 lb. per day) in gain. Unfortunately, the experimental design did not permit a comparison of effect on feed intake and efficiency.

EFFECT OF PREVIOUS TREATMENT—The previous wintering rations did not appear to have any appreciable effect on the later gains in the fattening phase. The steers that had received the pelleted poor quality alfalfa hay gained an average of 2.30 lb. per day on the fattening rations.

The steers on the chopped alfalfa hay plus the rolled oats gained 2.31 lb. per day, while the steers on the long hay and oats gained 2.28 lb. during the fattening phase. It is probable that the attempt to keep all steers gaining alike minimized any possible effect of previous treatment on subsequent gains.

Appreciation is expressed to Chas. Pfizer & Co., Inc., for stilbestrol pellets and vitamin A used in this experiment.

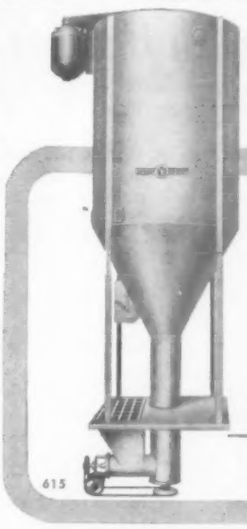
Sales Up, Earnings Off

NEW YORK—West Virginia Pulp & Paper Co., New York, has released preliminary figures showing record sales and decreased earnings for fiscal year 1961 which ended Oct. 31. Sales totaled $251,600,000 and earnings were $8,330,000, equal to $1.55 a share.

Although the paper company's dollar sales volume topped the 1960 high of $250,300,000 by about $1.3 million, earnings fell below last year's $11,017,000, equal to $2.07 per share.

A company spokesman pointed out that costs in connection with the start-up of extensive new facilities accounted for more than the total decline in company earnings.

The company reported that earnings for the fourth quarter of 1961 amounted to $3,172,000, equal to 60¢ a share, as compared to $2,197,000, or 41¢ a share, for the same period last year.



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Stabilized Vitamins report

Vitamin A Needed For Reproduction

• Reproduction can be affected adversely in vitamin A deficient animals. The vitamin is needed to maintain normal activity of the epithelial cells which line the organs of reproduction.

Vitamin A Panel, National Feed Ingredients Association, Annual Meeting, September 1961

Carotene Conversion Occurs In Gut Wall

• In most farm animals, carotene and other forms of provitamin A are converted to vitamin A by the cells which line the intestine before being absorbed by the blood or lymph. Cells damaged by enteritis convert inefficiently, providing only small amounts for absorption.

T. Moore, Vitamin A, Page 151

Disease Increases Need for Vitamin A

• Increased levels of vitamin A are helpful in some disease conditions, and increased levels of all vitamins may be helpful for flocks that have temporarily reduced their feed intake because of disease.

H. R. Bird, Texas Nutrition Conference, 1961

Hot Weather, Dry Forage and Vitamin A Deficiency

• High temperatures and exposure to sun both decrease the vitamin A reserves of cattle. Such depleted cattle are then increasingly distressed by heat and sunlight. Liver storage of vitamin A drops rapidly in animals consuming mature forage.

H. N. Brockelsby, Nutrition Consultant, Long Beach, California

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Suggests Allotments Through Handlers to Producers

LAS VEGAS—Arlo V. Turner, chairman of the board of the Grange Co. of Modesto, Cal., a major feed and poultry producing firm in California, proposed in his hearing testimony at Las Vegas that the Secretary of Agriculture consider a method of operating turkey marketing agreements as suggested by "a number of experienced people in the industry."

"We have been told by people experienced in the conduct of marketing agreements and orders, and by attorneys, that the law would allow the creation of allotments through handlers to producers of turkey hatching eggs and/or meat birds based on historical production for year or years selected, which allotments could be made transferable by the producer at will from one handler to another," Mr. Turner testified during the market turkey and turkey egg hatching marketing order hearing conducted in Las Vegas Nov. 29-Dec. 1.

"In the case of turkey hatching eggs, the pullorum program which is compulsory in most turkey states, including required reports of egg settings by hatcheries, would make it easy to determine history. First processors records and other sources are available to prove the historical background of producers of turkeys for market."

Mr. Turner introduced his explanation of this method by saying, "Since this method, we understand, was not fully investigated by the committee (National Turkey Advisory Committee), and was not, for that reason, incorporated as a possible method for consideration during these hearings, we respectfully suggest to the secretary that it be carefully considered by him in making his decisions."

Testifying for Others

Mr. Turner said that in addition to representing himself and the Grange Co. he was testifying for a number of independent and contract producers. "Those for whom I am testifying have, for many years, had a proprietary part in the production of 2½-4 million turkeys per year, and the production of more than enough turkey hatching eggs to produce that many turkey poults," he said.

"More than 80%" of the Grange Co.'s business, Mr. Turner said, is farming, including turkey hatching egg and turkey production.

Mr. Turner declared, "All of those for whom I am testifying believe:

"1. That supply management by the use of marketing agreements and/or orders is necessary for the continued solvency of producers, and to keep production in the hands of farmers.

"2. That two marketing agreements, one for turkey hatching eggs, and another for turkeys, are advisable, to supplement each other at different seasons in a turkey year. If the law allows it and the secretary so decides, we have no objection to including them both in one master agreement.

"3. That this is a rapidly changing world in which changing conditions will make it necessary to repeatedly amend any marketing agreements which receive a favorable vote upon advisory committee recommendations. They will also need prompt amendment because ways to make them work better will appear almost as soon as their operation begins.

"4. That because of the rapidly deteriorating position of turkey producers all sensible speed is of the essence."

Example of Operation

Mr. Turner offered the following example of how the method of operating marketing agreements suggested in his testimony would work:

". . . Let us consider a producer who had an allotment certificate for 10,000 hatching eggs, or 10,000 turkeys. The first handler of eggs or turkeys would be required to endorse the producer's official allotment certificate presented by a producer at the time of sale, with the date and the number of hatching eggs or eviscerated weight of the turkeys delivered, with the handler free to market or otherwise dispose of them in any way he chose. Such eggs or birds should be completely free to move in the channels of trade, in 'private enterprise.'

"But, there might be a set-aside in operation. For discussion purposes, let us consider a time in which there is a 10% set-aside. In that case, the producer of hatching eggs or turkeys with a 10,000 certificate should be able to market 9,000 in a free, unrestricted market. In that case, the other 1,000 eggs or turkeys would be subject to disposition of the authority which handles pool eggs and/or pool turkeys in the way it chooses as the best to realize the highest possible return for surplus eggs and/or turkeys.

"Operating under this method, bankers, production credit associations and other production financers might reasonably suggest to producers that hens producing 10% of the hatching eggs should be killed, or that a producer of turkeys for market should reduce his production to 90% of his allotment certificate. This would make more budget funds per laying hen or per meat bird available to producers. It would automatically

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SEE CHICKS DEVELOP IN PLASTIC EGGS

CLEMSON, S.C. — Poultry scientists at Clemson College are using artificial "picture window" eggs to check on the development of a chick before it hatches. Small glass beakers and clear plastic eggs are being used to grow young chicks so researchers can watch the embryonic development, it was reported in a research report by the college.

Poultry scientists have been searching for a satisfactory method of studying the growth of chick embryos within the shell. Previously, if scientists wanted to check on the development of a chick before it hatched, they had to break the egg shell, thus killing the embryo.

Thus far, life has been maintained in the artificial eggs for eight days, it was reported. During this period, the basic structural formation of the chick has been completed. M. A. Boone, associate poultryman, said, "It is hoped that this new method of study will be of value in checking the effects of hormone and vitamin injections on the growth of chicks."

If the work is successful, he states, the knowledge may be transferable to the study of other animals, even humans.

make it profitable for a producer to produce only what he could freely sell and get paid for on delivery. If a producer reduced his production in anticipation of a set-aside, such reduction should not affect his base allotment."

Comments on Referendum

Mr. Turner noted that Congress has given only producers the right to vote on whether they want marketing agreements and/or orders. "We believe that the nationwide collective judgment of producers will demonstrate their ability to make sound decisions respecting their welfare," he testified. "We wish to have it thoroughly understood that we believe this to be a producer problem which should be settled by producers.

"Should marketing agreements and/or orders go into effect, we believe that all producers and everyone in allied industry, whether presently in favor of or against marketing agreements, should do everything in their power to make them work, including contribution of their experience and time, when requested."

Mr. Turner further stated, "We understand that these hearings are conducted for the purpose of providing the secretary of agriculture with sworn testimony concerning things necessary for him, as a judge appointed by Congress for that purpose, to determine whether or not marketing agreements within the provisions of the 1937 Marketing Agreement Act as amended should be submitted to producers of turkeys and/or to producers of turkey hatching eggs for a vote by secret ballot.

"We believe we are here for the purpose of discussing the practical effects of these proposals and to suggest additions to and changes therein, rather than to debate again, as we did this year before congressional committees, whether the secretary now does have the powers given to him by Congress, and/or whether producers shall have a right to vote. These things are already decided, by Congress."

"Least Possible Interference"

". . . We believe that marketing agreements and/or orders should be so prepared and operated as to cause the least possible interference with the operation of those many activities which serve and supply producers. We also believe that no allotment, which could to any extent become a monopoly, should be given under a marketing agreement or order to anyone because he is a handler or because he provides supplies, equipment, or services to producers.

"Some of those who serve agriculture are quite outspoken about the value of private enterprise in our United States. We agree that private enterprise should be operative in the service, supply, and equipment businesses which serve farmers. With private enterprise in those businesses which serve producers of turkey meat and turkey hatching eggs, producers should be able to use the supplies and services they choose for a turkey breed or strain of their choice, hatched in a hatchery they choose to do business with, fed the feeds they wish to use, etc., and should be able to sell their eggs and birds to or through a marketing agent of their choice."

Mr. Turner said that "because evidence of Canadian and other import and/or export competition has been presented at these hearings," he and the others for whom he was speaking wished to put the following statements in the record:

"The first is that Article 11 of GATT permits import restrictions on free commodities (which presently include turkeys) if necessary to support any domestic program.

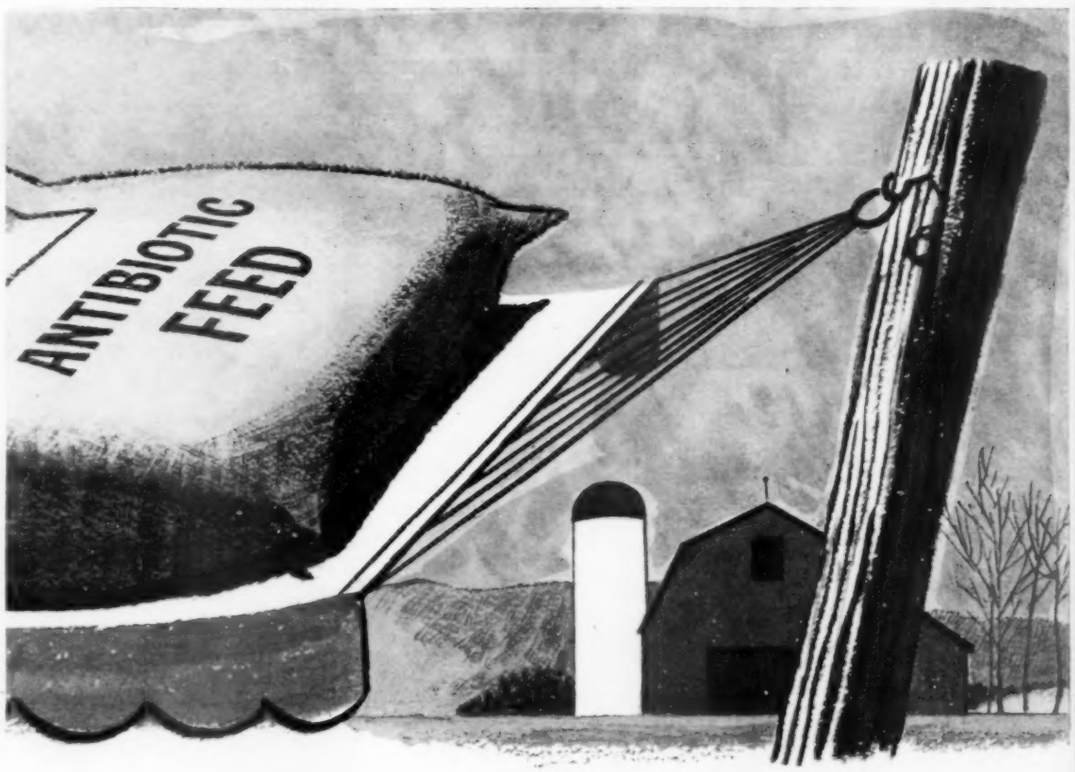
"The second is that section 22 of the Agricultural Adjustment Act says that when the secretary of agriculture has reason to believe that imports of free commodities are rendering domestic programs ineffective he may so advise the President and the tariff commission. Then the President, on the advice of the tariff commission, may, at his discretion, impose tariff duties up to maximum of 50% of their value on an ad valorem basis, or put quantitative restrictions on imports of free commodities.

"As many of those present know, during recent years Canada has, at times, arbitrarily violated GATT provisions allowing free flow of U.S. turkeys into Canada, and is presently limiting imports of U.S. turkeys, in violation of the provisions of their GATT treaties."

Producers Included

Mr. Turner noted that "a 400-bird freedom from inclusion in the proposed agreement for turkey meat producers has been proposed" and offered this opinion:

"That 400 limitation may or may not be too large. It was based on an arbitrary division of the Bureau of Census for 1959. However, the limitation should refer to a farm family, rather than an individual, to avoid increase in production of free turkeys on one farm by having all members of a large family own 400 turkeys each. A parallel situation is the present 160-acre limitation in certain government programs, where in case there are 10 in a family, the effective practical limitation is 1,600 acres."



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200g/T tetracycline-type	38%	54%	43%	9%	0%
150g/T tetracycline-type plus 50g/T Baciferm	8%	11%	9%	6%	1%
100g/T tetracycline-type plus 100g/T Baciferm	10%	7%	5%	3%	2%
200g/T Baciferm	**0%**	**0%**	**0%**	**0%**	**0%**

*Potentiation gives average blood levels of 0.5 mcg/ml.
**No data were obtained during first week.

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Maple Leaf Mills' Income Increases

TORONTO — The first report to shareholders issued by a newly formed Canadian company, Maple Leaf Mills, Ltd., for the year ended July 31, 1961, shows an increase of $161,818 over the previous year's net income. (Also see story page 49.)

Maple Leaf Mills came into existence April 1, 1961, as the result of the merger of Toronto Elevators, Ltd., Maple Leaf Milling Co., Ltd., and Purity Flour Mills, Ltd.

The first report combined net income of the new company from April 1 through July 31 with net income of the predecessor companies for eight months ended March 31.

Net earnings (excluding adjustments for comparative purposes) were $2,138,336 for the fiscal year ending in 1961. This is compared to the combined earnings of the companies for the year ended in 1960 of $1,975,229. Combined earnings in 1959 were $2,464,864; 1958, $1,827,230, and 1957, $1,340,236.

A five-year comparison of net earnings available for common shares: 1961, $2,042,871; 1960, $1,882,072; 1959, $2,371,671; 1958, $1,733,946, and 1957 $1,244,428.

After preferred dividends, the net income is $1.39 per share on the 1,519,092.85 shares of the common stock of the new company outstanding as of July 31. Dividends at the rate of 50¢ per share per year are currently being paid on a quarterly basis on the first day of January, April, July and October, the report states.

It was also reported that the company has entered into an agreement to sell $15 million principal amount of its 5¾% debentures, of which $12,500,000 principal amount will be sinking fund debentures to mature Dec. 1, 1981, and of which $2,500,000 will be serial debentures to mature $500,000 on Dec. 1 in each of the years 1962-1966 inclusive. Just under $10 million of the proceeds of the sale will be used to retire the outstanding first mortgage sinking fund bonds and the general mortgage bonds of the company and the balance will be used to reduce bank indebtedness. The financing will have the desirable effect of lengthening out the average term of the company's funded debt, it was stated.

Projects Under Way

The company reports that, apart from normal expenditures designed to keep manufacturing facilities up to date and efficient, there are two major projects under way and one was completed during the fiscal year.

"At Ste. Foy, Quebec, a modern, compact, highly efficient feed plant has been constructed and has been operating for several months. In western Canada a small fertilizer plant is ready to begin production. The major construction project is at Port Colborne where a new plant, replacing the one destroyed by fire a year ago, will be completed within a few months. This plant will rank among the finest flour mills in the world," shareholders were informed.

In reporting on operations, a development which indicates a diversification in the company's activities, was the appointment, effective Jan. 1, 1961, of Maple Leaf Mills, as exclusive sales agent for the products of E. D. Smith & Sons, Ltd., Winona, Ontario. Their products fall into the general category of pure jams, jellies, pie fillings, cherry and tomato products, as well as H.P. and Lea & Perrins sauces.

Elevators, Grain

Elevators at Toronto and Sarnia operated at a high level of capacity, and, although costs, mainly labor and repairs, are "difficult to hold in line," revenue is still controlled by maximum tariff charges set by the board of grain commissioners. Since these charges were established 10 years ago it is difficult to justify the building of new storage space or any extension of existing facilities, it was stated.

With the Toronto elevator on the St. Lawrence Seaway, the firm has made "every effort" to build up grain volume of direct to ocean shipping. Facilities are ample and in many cases the ocean boats are not equipped to handle grain as fast as it can be loaded, the report indicates. Five ocean ships were loaded during the season, largest of which took 329,000 bu.

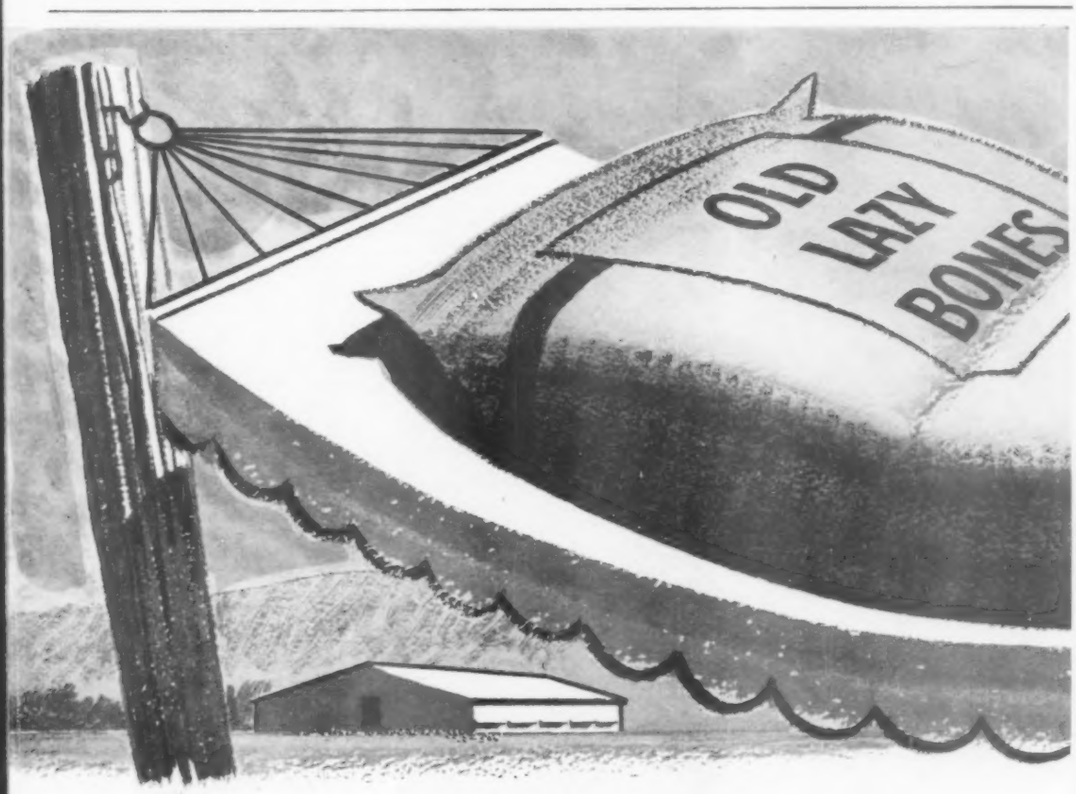
Grain merchandising in Toronto and Montreal was termed "successful." The year has been one of "violent and erratic" volume in flax and soybeans, making trade very difficult, and the partial crop failure in western Canada will force importation of American and, perhaps, Argentine or Australian oats. In the year ahead, according to the report, instead of trading in a surplus supply market, the company will be reaching for wheat, barley, oats and rye in whatever markets they can be found.

The year's activities have been over-shadowed by the fire Oct. 7 which destroyed the Port Colborne production facilities, shareholders were informed. This plant had been supplying about 25% of the flour requirements and 20% of the mixed feed production. The engineering and production department has been mainly occupied with the design and building of the new plant.

Bulk flour and feed operations continue to expand, and the existing bulk trucks have been fully utilized, according to the report. This manner of delivering production will "undoubtedly" expand in the year ahead.

Feedlot Being Built

HILLSBORO, TEXAS — Construction has begun on a new cattle feedlot for Neuhoff Packing Co., Fort Worth, on Highway 75 north of Hillsboro. Pens are being built in a straight line, with the idea of maximizing the mechanical handling of feed. Capacity for 20,000 head is planned. Grain storage tanks are now completed, and construction of a feed mill on the property is the next step. T. M. Moore will be manager of the feedlot.



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Broiler Bootleggers Possible Result of Controls: Economist

By Special Correspondent

SEAFORD, DEL. — Bootlegging broilers might easily become one of the results of government controls for broilers, it was indicated by Dr. William E. McDaniel, agricultural economist, University of Delaware, Newark, in an address to some 150 poultry servicemen at the final session of a short course.

He said, "Let me emphasize, marketing orders have not established prices that must be paid to producers or to other handlers of the product. The effect on price has been through control of supply and quality sent to market.

"If marketing orders are used in the broiler industry, it seems to me that production would have to be controlled, since I cannot visualize raising broilers and then destroying them to control market supply."

There would be quotas assigned to egg producers, hatcheries, growers and processors. Anyone who handles more eggs or chicks than his own quota would be a bootlegger, he said.

Possible Opposition

The economist pointed out that there will be a chain reaction to backfire on the U.S. Department of Agriculture. If the supply of broilers is decreased, less eggs will be purchased by the hatcheries. How is this going to affect the egg producer, Dr. McDaniel asked. Will quotas be given to each egg producer? If so, will the price paid to the egg producer be supported? If the egg producers are not given some consideration, they will fight a program which will result in their market being reduced.

If broiler production is reduced and quotas are given to hatcheries, which reduces per cent of capacity used, they will want a higher price for their chicks because their cost of hatching per chick will be higher. They will fight a program, the economist warned, which does not insure them a higher price per chick.

Feed dealers will probably think twice before they support a program which reduces the demand for their feed.

"Processors on the Delmarva Peninsula are not processing at full capacity at present. When the amount each plant processes is cut back, will the processors want part of the increased price to defray the decreased processing?

"Now I raise the question of how much of the increased price per pound is left for the grower after each of the other segments of the industry is satisfied for the inefficiencies that are forced upon them?"

Dr. McDaniel warned the servicemen at the short course that market controls could run the broiler growers right out of business. He said the immediate effect of a supply reduction will probably give a satisfactory increase in price. But, as the price of chicken goes up, the consumers will bid up the price of red meats. This will encourage the red meat producers to increase the number of animals produced. In two or three years the supply of red meat will be increased and the price per pound for the same amount of broilers will drop.

The broiler industry will become "sewed up" too.

With quotas assigned to egg producers, hatcheries, growers and processors, what arrangements will be made for newcomers to enter the business?

What arrangements will be made for firms to increase in size for the purpose of increasing efficiency? If quotas can be sold, their values will be capitalized.

Proposals Not New

"Don't forget that most of the proposals that will be made have been tried on some product in the past 30 years—between the years of the early 1930's, when Secretary of Agriculture Wallace had little pigs knocked in the head and crops plowed under, to last August when President Kennedy signed the 1961 Agricultural Act.

"The real difficult problem is not devising a method of control, but in devising a method of control which will be accepted by all segments of the broiler industry," Dr. McDaniel said.

Offering a few tips for anyone in the broiler business (or any business as far as that goes) was Herbert Schaller, Chas. Pfizer & Co., Inc., New York. The average person works only 10% of his time. More work is the only way you can grow.

You are never too old to learn. You must keep at it. Never rest on what you know. You have this to build on.

There have been thousands of changes in agriculture lately and many more to come soon. Everything changes rapidly except people, Mr. Schaller said. It is essential for people to develop character. This is made up of personality, an open mind, willingness, humility and common sense.

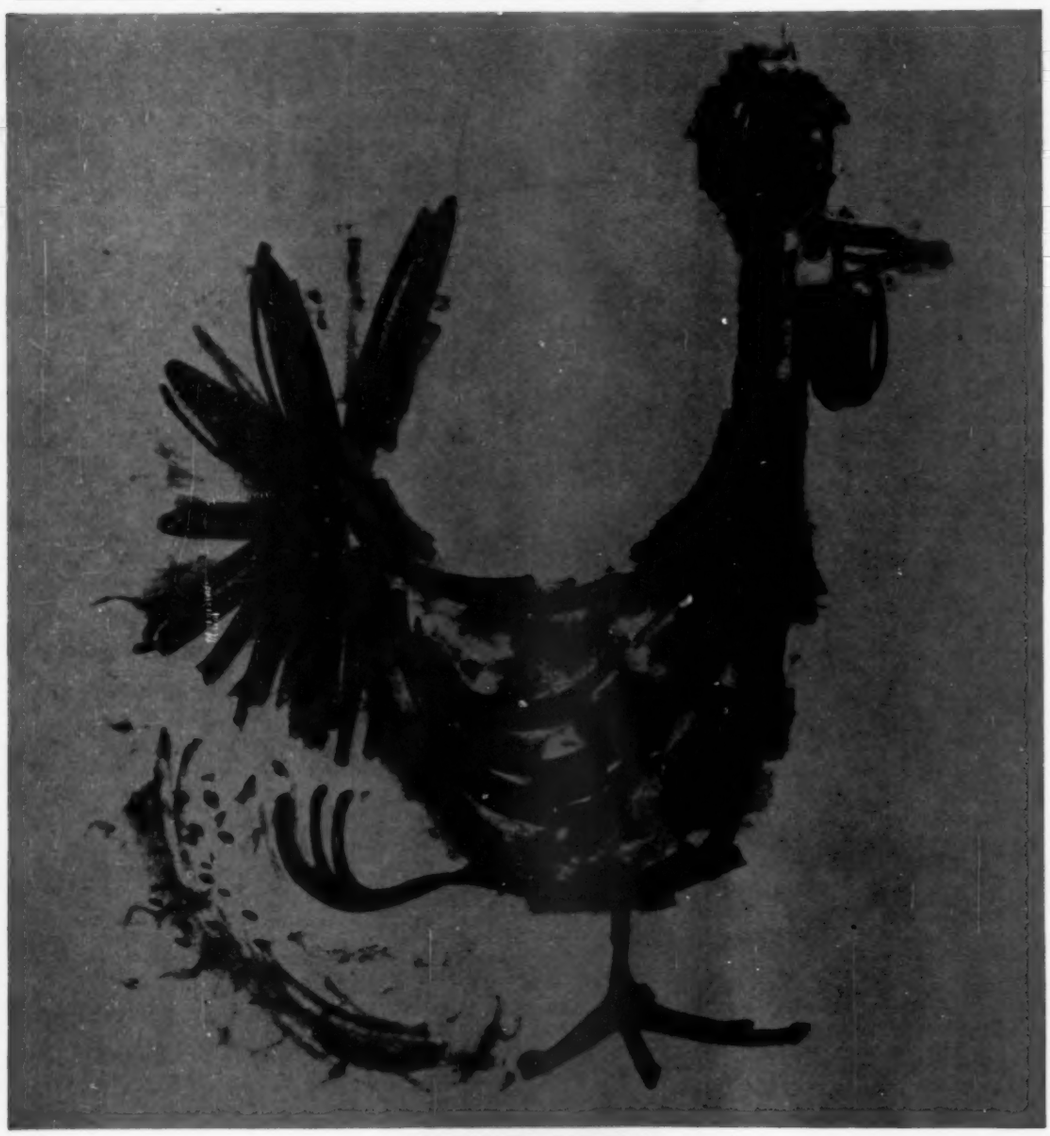
On the technical side of broiler production, Daniel Palmer, the University of Delaware, reported on proper temperatures for early brooding. For maximum growth, the brooding temperature should be 94-115° the first day and drop uniformly to 88° on the ninth day. Humidity makes no difference on growth for the first 18 days. These results were found as the result of research by USDA at Beltsville, Md.

Horace Nobmann New Feed Operation Owner

RICHMOND, CAL. — Horace S. Nobmann, well-known northern California feed man, is the new owner of the California Grain & Milling Co., Richmond.

Mr. Nobmann began his career in the feed and grain industry in 1934, and, in recent years, was production manager of the Nulaid Farmers Assn., San Leandro.

In acquiring the long-established general feed operation, Mr. Nobmann leased all plant facilities and inventory from George Prytz. Mr. Prytz, 81, retired after more than 50 years in the feed and grain business. Mr. Nobmann said no changes are planned at this time in the business.



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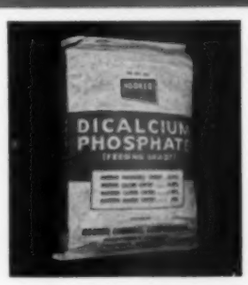

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AMINO ACIDS
And the Laying Hen

By Dr. M. L. Sunde
University of Wisconsin

Almost half of our poultry income in the U.S. comes from layers. In the Midwest this is even higher. About 20 lb. of feed are required to raise a pullet to housing time, and she will eat almost 100 lb. more during one year in the laying house. Because of the low salvage value of laying hens at the end of the laying year, each hen must produce enough eggs to pay for this 120 lb. of feed in addition to the chick cost, housing cost, labor cost, vaccinations, medication and miscellaneous items such as electricity and litter. Of these expense items, feed cost is the biggest item. This item alone makes up 60-70% of the total cost depending on how the individual handles his feeding.

The cost of the protein and energy makes up about 90% of the total feed cost. During the early growing period protein requirements are high, but as the bird approaches maturity this decreases considerably and remains at a reasonable level during the laying period. Energy costs remain at about 50% during the laying period, but during the early period they are slightly below the 50% level. This is difficult to calculate because the value of the unknown growth factor sources added to starting and growing diets is almost impossible to calculate.

More Difficult Now

A few years ago it was easy to outline the needs of protein for the chick and the hen. Now it is difficult to do without considering a number of other factors which weren't considered a few years ago. The energy level and the level of each amino acid must be considered before this can be determined with much accuracy. This has required the use of electronic computers. More on this later.

Laying hens require most of the same amino acids that are required by the chick. Because the requirements for the chick have been studied much more than the hen's requirement, the chick is used as a guide for the hen work. One source of error in calculation of the amount of amino acid in feeds occurs because of differences in the values in the tables to which we have access. For instance, the combined content in corn of methionine and cystine varies in tables from .2 to .4%. If the diet contains 70% corn, this would mean that the calculated amount of methionine and cystine could vary .14% in the entire diet depending on which table values are selected. An amount of .14% is almost three pounds of methionine per ton of feed. This error then is three times the usual recommended addition. This creates fantastic problems for the formulator of laying rations and means that each formula needs to be checked with laying hens, with and without added methionine.

NRC Requirements

The National Research Council has reported requirements for the laying hen as follows: Lysine, .5%; methionine and cystine, .53%; tryptophan, .15%; leucine, 1.2%; isoleucine, .5%, and threonine, .4%.

Requirements for the other amino acids have not been established although Adkins of this station has suggested that the laying hen's requirement is between .6 and .7% of the diet.

Many attempts over the years have been made to try to get hens to lay eggs at a normal rate on amino acid mixtures. Most, if not all, have resulted in only partial success. In some, satisfactory egg production has been obtained but weight losses and decreases in egg size were noted. During the past year we have been successful in getting two old hens and two pullets to lay at quite a good rate of lay for a period of six months. Figure 1 shows one pullet after seven weeks of production. In addition they gained about a quarter to a half pound of body weight. They were able to maintain their egg weight, but they did not increase it as they should during the laying year. This means that this amino acid mixture is still either inadequate or is improperly balanced. Additional refinements are still necessary.

FIGURE 1—This pullet, fed a free amino acid diet (no protein) laid 41 eggs in 49 days.

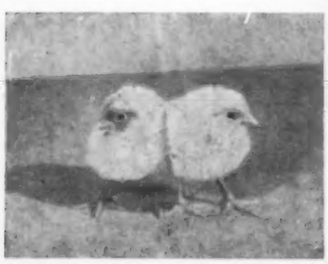

FIGURE 2 — Chicks from hens fed the free amino acid diet are shown here.

FIGURE 3—This hen, in her second year of production, molted on the amino acid diet. Note the white feathers on parts of the neck and on the wing bar. After she completed her molt, she began laying eggs again. She was out of production five weeks. The dark features are caused by soybean oil in the diet getting on them.

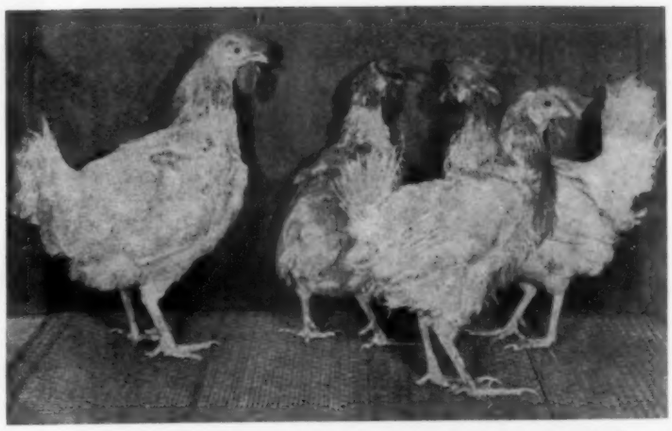

FIGURE 4—These hens (two of them near the end of their second year of lay) had not been fed intact protein for more than six months. The old hen in the foreground still has the same feathers she had 20 months before the picture was taken.

The amino acid mixture that gave these results is given below. It was fed with purified minerals, cellulose, an antiacid preparation, sodium bicarbonate, vitamins, soybean oil, ethoxyquin and autoclaved corn starch.

Amino Acid Mixture

	%		%
L-arginine HCL	2.0	DL-tryptophan	.4
L-glutamic acid	7.0	DL-valine	2.2
Glycine	2.0	DL-isoleusine	
L-histidine HCL	0.6	(50% L)	2.0
L-lysine HCL		L-leusine	2.0
(95%)	1.6	DL-phenylalanine	1.0
DL-methionine	1.2	L-tyrosine	.9
DL-threonine	1.8		

The eggs from these hens appeared to be normal in every way. When the eggs were broken out and Haugh units determined, they averaged 86 Haugh units and the eggs from hens fed the practical control diet averaged 84. The higher the value, the better the interior egg quality. The eggs hatched well and produced normal chicks (Figure 2). The shanks were not as yellow as the control chicks, but this is caused by the lack of pigment in the diet.

The chicks gained weight at a nor-

M. L. Sunde

AUTHOR — Dr. Sunde, professor of poultry husbandry at the University of Wisconsin, is the 1961 winner of the poultry nutrition research award sponsored by the American Feed Manufacturers Assn. He has worked on vitamin and mineral requirements and the use of fats in poultry diets. His research also has concerned amino acid requirements of laying poultry and the relationships of these nutrients to energy.

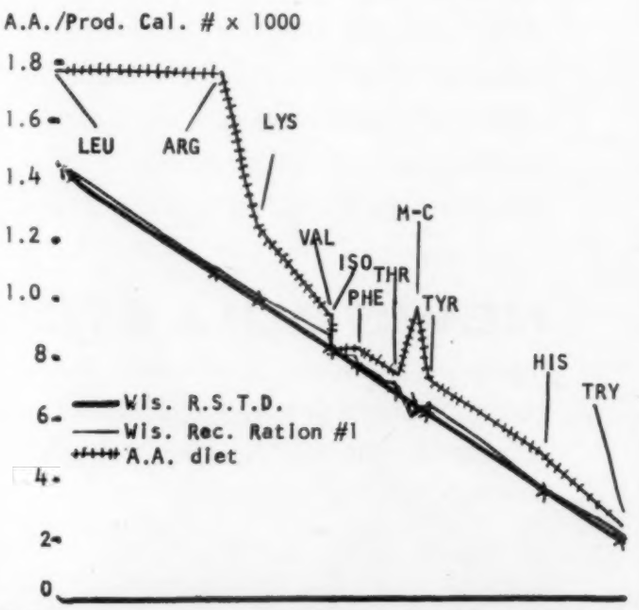

FIGURE 5—In this amino acid "silhouette" for laying hens, the heavy black line represents the Wisconsin Random Sample Test diet. The narrow black line is one of the diets recommended by the University of Wisconsin poultry department. The other line is an amino acid mixture on which hens continued to lay eggs for a six-month period.

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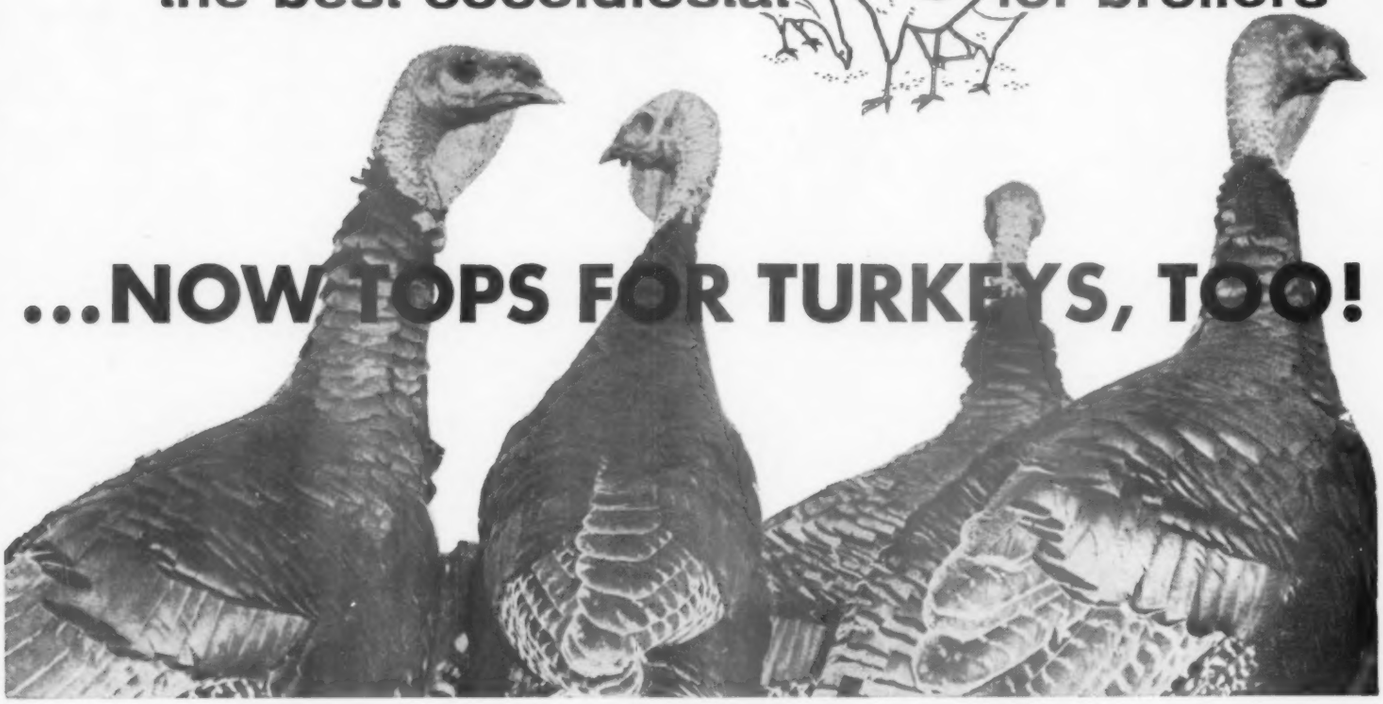

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mal rate when fed a practical type diet, but didn't grow quite as fast as chicks from the hens fed the practical diet when both were placed on an amino acid diet. This suggests that unknown growth factors still have a place in our growing diets.

One hen, which was in her second year of lay, actually went through a molt (Figure 3) and again began to lay eggs. This means that the diet was complete enough to allow normal egg production and to allow normal feather growth. Figure 4 shows the appearance of two hens finishing their second year of lay and two pullets near the end of one year of lay.

It is of interest to apply the "silhouettes" developed by Dr. Michaud of Merck & Co. to the type of rations used for laying hens. This "silhouette" principle takes into account the percentage amino acid and the energy content of the feed. The diet used for the Wisconsin Random Sample Test was used as the standard diet. This ration is shown below.

Ingredient	lb./ton	Ingredient	lb./ton
Gr. yellow corn	1,240	Calcium carbonate	32.5
Ground oats	200	Di-calcium phosphate	7.0
Std. middlings	100	Salt, iodized	10.0
Alfalfa meal	50	Manganese sulfate	.5
Soybean oil meal	200	Vitamins	+
Meat scrap	160		

To each ton of feed .4 oz. of riboflavin supplement (4 gm./lb.), 8 oz. of vitamin B_{12} supplement (6 mg./lb.), 10 oz. of vitamin D_3 supplement (3,000 ICU/gm.), 20 gm. of niacin, and 3,000,000 units of vitamin A are added.

This ration has given excellent results.

An Agricultural Research Service Bulletin, ARS-44-79, September, 1960, "Random Sample Egg Production Tests, 1958-1959, Combined Summary" shows on page 18 the hen housed egg production for each stock in descending rank. Of the top six, four were entered only in the Wisconsin test and the other two were entered in one other and two other tests, respectively. In the 1959-1960 test, the average hen housed egg production to 500 days of age was 229.9 eggs. In 1960-1961, this figure was 238.1. These are very respectable production figures. This does not mean that the calculated amino acid contents are the requirements just because optimum production was obtained. It only means that the levels of each amino acid are sufficient and that none are in excess to the extent that an imbalance has occurred.

The "silhouette" is shown in Figure 5. The heavy solid straight line is the ration used in the Wisconsin Random Sample Test and has been explained above. This ration is not perfect because the line is straight. The various amino acids have been plotted in descending order so that they would fall on a straight line. Note that one of our recommended formulas also falls very close to this line. This is also to be expected, because these diets do not vary much except in content of meat scraps and middlings. Even the amino acid diet shown earlier did not vary much from the standard diet except for the content of arginine. Undoubtedly, the laying hen does not need this much arginine. Even though all amino acids are on or above the line of the standard diet, performance was not as good. Whether this results from imbalance, poor utilization of pure amino acids or from needs of other unknown factors is still a question which must be answered.

We still know little about the whys and wherefores of feeding the laying hen, but we have increased production per hen from 134 eggs in 1940 to over 200 in 1960. We don't know how much of this is due to improved feeding and how much to improved breeding, but certainly these are the two major factors. Our knowledge of nutrition has increased considerably over the last 20 years, but our appreciation of feed cost per dozen eggs and an understanding of the costs of the various nutrients have increased fantastically during this period.

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Sterling's got it—a special salt for every feed you mix!

Chances are you already know Sterling Supermix Blusalt for livestock feed mixing. It has seven vital trace elements thoroughly blended in the exact proportions nutritionists say are best for livestock. But do you know the others? There's Sterling Swine Supermix Blusalt with extra zinc to combat Parakeratosis—plus the other elements pigs need, and herdsmen insist on, in feeds . . . there's Sterling Gold Bond Blusalt, expressly blended for broiler and turkey feeds, heavy on manganese and zinc to prevent leg and hock weakness and to improve growth . . . and there's Sterling Green'salt for sheep, with 10% phenothiazine added to keep internal parasites from cutting flock profits.

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"I shoot for $30,000 profit a year from 500 head"

"And Stilbosol accounts for $3,000 of that profit," reported veteran cattle feeder Harry Marks, Delavan, Minnesota

"We try to run 500 head of cattle through our yards every year and I feed for a gross margin of $60 a head. Of that profit, I figure Stilbosol accounts for 10%, and that's conservative.

"We're feeding heifers now. You can buy 'em cheaper and they sell for only a little less than steers. We feed our heifers to around 950 pounds. With Stilbosol, our heifers have gained an average of two pounds per day . . . and that's from western weight to market weight. That includes about 5% shrinkage at both ends. And it usually takes about two weeks before they recover and start to eat right.

"One year we fed some steer calves on silage without stilbestrol in our ration and they gained an average of 1.45 pounds per day. The next year, we fed 'haylage' and stilbestrol to our steer calves and they gained an average of 1.95 pounds per day. We weigh cattle every three months on our place so we know the gains we're getting.

"My pride and joy is our new feedlot. We call it 'Cattle Castle.' My 12-year-old boy, John, is going to be responsible for the feeding. He'll feed 200 head of cattle three times a day for a total of 34 minutes. All he has to do is flip five switches. I put a window in the control house because half the fun in feeding cattle is to see 'em eat," Harry concluded.

After seven years, Stilbosol continues to give feeders an extra 15% gain on 10% less feed.

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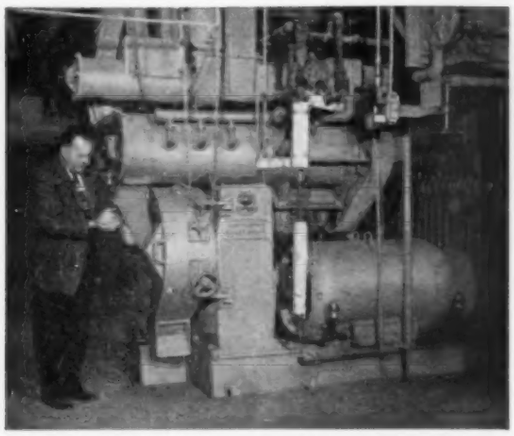

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ARKANSAS

(Continued from page 34)

year when we should have had only about 85 million."

"Why are you in business?" Mr. Teague asked. "Just for one purpose: To make money. Outside of 1948, turkey prices have come down every year I have been in business—and that's been 41 years.

"I have never wanted controls," he added. "I believe that we can control this thing through the industry itself, but I will abide by the controls if they are enacted."

NTF's Position

M. C. Small, executive secretary of the National Turkey Federation, Mt. Morris, Ill., also a member of the panel, told the group that the national federation has not taken a stand on the marketing proposal.

"There are some basic things that need to be straightened out about the National Turkey Federation and the marketing orders," he said. "NTF has not taken a position either for or against the marketing orders; no official of the federation has testified in an official capacity at any of the hearings, and officers of the federation who have testified did so on their own. NTF probably will not take a position. I don't like some parts of the order, but I do like other parts of it," he added.

He told the convention that four years ago NTF sponsored a National Turkey Enabling Act which was introduced into Congress. The act is still pending, however.

For or Against

Mr. Small scored the idea of anyone being either for or against the proposed turkey or turkey hatching egg orders without being specific about what is wrong with either or both.

"What disturbs and irritates me," he said, "is that most people take a position either completely for or completely against this thing." He said he was also irritated by people who say they are for the orders because they are "going broke" or because they feel that "the feed companies are trying to gain control of the industry."

"The marketing orders would tend to maintain the position of people already in business and keep out those not presently in the industry. And they would tend to keep feed companies, hatcheries and other promoters from over-selling the industry."

Mr. Small declared that he believes the turkey industry's problems won't be solved without government aid.

"The government doesn't want to run agriculture," the federation official asserted. "They want to set up a program that will be satisfactory so it will enable them to get re-elected."

He said the industry should try to determine exactly where it stands and why it got that way.

Comments on Research

"I'm for research," he said, "but research has made it so easy to raise turkeys that everyone is in the business. Don't get me wrong, I'm not against research, and I want it to be continued."

He argued that government purchases have hurt the industry because "we have been too successful in getting the government to purchase turkey.

"This year has been the roughest for me of any time I have been in the National Turkey Federation. I have been cussed and discussed because I didn't get the government to buy more turkeys. I finally had to

Here are some reports on recent work offering a solution to the Blood Spot problem

FEEDSTUFFS, June 11, 1960

Scientist Discusses Egg Bloodspot Causes

MANHATTAN, KANSAS—Rodenticides or a shortage of vitamin K in rations may cause eggs with bloodspots, according to Dr. Paul E. Sanford, poultry husbandry department at Kansas State University.

Referring to low vitamin K, the poultry scientist noted that most poultry rations now contain dehydrated alfalfa meal as a natural source of vitamin K, and that some feed manufacturers are adding synthetic vitamin K as a guard against the hemorrhagic condition.

Dr. Sanford says a 1-2% loss due to bloodspots is to be anticipated (on the candled basis), but if the grading loss runs much higher than 2%, a poultryman "must" become concerned.

Firm's Test Shows Vitamin K Reduces Blood Spot Incidence

VALLEY STREAM, N. Y. – Recently announced experimental results indicate that the feeding of vitamin K reduces the percentage of blood spots in eggs—an abnormality which causes heavy marketing losses.

This observation comes from work conducted by Heterochemical Corp. to study the value of using stabilized vitamin K premixes in retarding the incidence of egg blood spots.

In a technical paper on the tests involving "Hetrogen K Premixes," a brand of stabilized menadione sodium bisulfite produced by Heterochemical, Raymond Berruti and Gilman T. Dedrick conclude:

"It appears that under experimental conditions the addition of 4 gm. of stabilized Hetrogen K per ton of commercial layer feeds would be of great economic advantage in decreasing the number of eggs with blood spots and increasing the percentage of marketable eggs."

Summarizing results of the study in which the incidence of blood spots, egg production, egg weight, interior egg quality and feed consumption were emphasized, Mr. Berruti and Mr. Dedrick report that hens with a history of high blood spots when taken off feed containing 4 gm. of stabilized vitamin K returned to laying eggs with a higher percentage of blood spots.

"These results suggest," they say, "that the stabilized K had a marked effect in prevention of hemorrhages of blood vessels inside the yolk sac and follicle."

More Research Needed

The investigators observe that the need for additional research in the area of reducing blood spot incidence is apparent, and they note that previous work with lower levels of vitamin K of "a questionable stability" showed no curtailment of blood spot occurrence.

They say the study they describe was initiated in view of recent technological advancement in the stabilization of vitamin K in premixes and in view of new information relative to blood spot formation.

They say blood spots in shell eggs continue to be a serious problem for the poultry industry. "Economic losses from these defects are great and with the development of automatic detecting devices the problem is becoming even more intensified from the standpoint of breeder and producer."

Test Procedure

Heterochemical's vitamin K study began with the placing of 540 White Leghorn hens, 14 months of age, in individual 8-in. wire cages. These hens were fed a basal diet on which they had been maintained since reaching 50% production.

The birds were divided into three rows of 180 birds each. Rows A and C were fed the basal diet, while row B was fed the same diet plus 4 gm. of Stabilized Hetrogen K per ton of ration. These hens were maintained in a cage layer house at temperatures which normally exist under winter conditions (in northeastern U.S.). A uniform light day of 14 hours was maintained.

After the fourth week, row B was split into two sections. One section continued to receive the basal ration plus vitamin K. The other section was fed the basal ration only.

Mr. Berruti and Mr. Dedrick report that the percentage of blood spots for row B, the group fed the basal diet and vitamin K, at the beginning of the trial was 6.9%. Row A and row C percentages were 6.3% and 7.7%, respectively.

At the end of the two-week period following initial feeding of Hetrogen K to row B, the incidence of blood spots dropped to 3% in this group, while little change in incidence appeared in rows A and C.

The investigators report that at the end of the four-week period a further decrease (1.7%) in blood spots was evident in row B birds. Row A and C hens continued to show only slight change in the percentage of blood spots.

Mr. Berruti and Mr. Dedrick note that birds receiving supplementary Hetrogen K returned to laying eggs with a high percentage of blood spots within 16 days after the removal of supplementary K from the ration. One half of the birds in row B which continued to receive supplementary K laid eggs with an incidence of blood spots of 1.9%, whereas the group of birds taken off of Hetrogen K laid eggs 5.4% of which exhibited blood spots.

Further investigation is needed, the report authors say, to determine whether the reduction of blood spot incidence among birds in the test group was "due to the effect of Stabilized Hetrogen K in keeping blood vessels in better clotting condition or due to increased availability over other forms of vitamin K."

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NEW DOUGLAS DIVISION—Executives of Douglas Chemical Co., Kansas City, are pictured as they discussed design of a bag to be used by the company's new premix feed division (Feedstuffs, Nov. 25, p. 4). Plans for the division are to cover the entire Midwest. Left to right are Frank Hamm, plant production manager; Jim Cole, nutritionist; Paul F. Smith, assistant general manager; Wayne Stepp, premix division sales manager; Gary Neilan, advertising manager and W. C. McCaslin, executive vice president and general manager of Douglas.

tell one large producer to get off my back.

"As a result of all of this competition and no way to do anything, we have got our industry in a hell of a shape. We know that we have too many turkeys and too many broilers. The prices have gradually worked down because large numbers of people got in the business."

"None Other Like It"

He called for thorough examination of the turkey marketing order proposal, saying there was nothing else in agriculture just like it.

"There is just no national program like this proposal," he said. "The others are regional or state in scope. The difference in this one and others is that the government will put teeth in this one and see that the industry runs it in the interest of the consumer."

Volume Regulation

Using a chalk board to outline the hatching egg marketing order, Mr. Small explained his interpretations of the proposal.

He said the No. 3 method of regulating hatching egg volume would limit the quantity of eggs set at hatcheries. If the secretary of agriculture concluded that the volume of eggs available for hatching was excessive, he could establish free and surplus percentages applicable to all hatching eggs received at hatcheries.

Method No. 1 prescribes that the secretary of agriculture establish the desirable quantity of hatching eggs a handler could set or cause to be set in any allotment period.

Under method No, 2, the secretary of agriculture would have authority to establish the quantity of hatching eggs a handler could receive for hatching in an allotment period. Allotments would be referrable to each producer of hatching eggs.

Mr. Small noted that the marketing order proposed for market turkeys, which currently contains but one method of regulating volume, would, if necessary, require that handlers set aside in a surplus pool a common percentage of turkeys processed.

Three Proposals

Mr. Small listed three proposals for relieving current problems related to current over-production of turkeys and the proposed marketing orders:

1. Obtain more authority for the marketing orders' advisory board and administrative committee and less authority for the secretary of agriculture.

2. Clear up the proposed egg order. Do away with volume regulation method No. 2 and possibly method No. 1 of the egg order.

3. Call the National Turkey Advisory Committee, which was appointed to make control recommendations to the secretary of agriculture, into session again for more discussions.

"Different Type of Bird"

Dr. John H. Quisenberry, head of the department of poultry science at Texas A&M College, who spoke on "What's New in Turkey Breeding," also touched briefly on the marketing orders.

He termed the proposals a "matter of great concern."

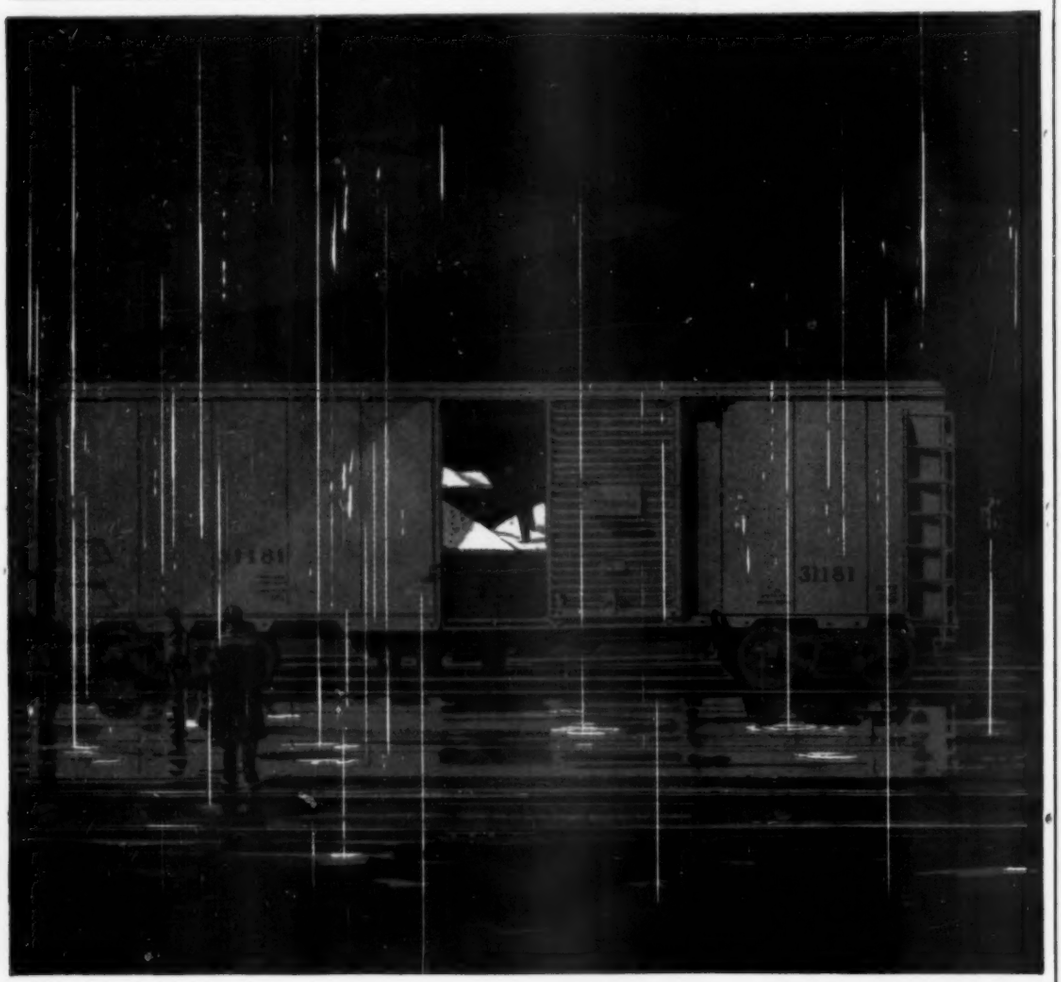
"No one knows whether or not the marketing orders will be adopted," he said. "If we decide that marketing orders must be resorted to in an effort to adjust demand to production, a different type of bird probably will be developed.

"I suspect that if we resort to controls, you will see the development of a more moderate type of bird because of the increased emphasis on reproductive traits."

Dr. Quisenberry predicted that breeding farms will continue to "grow bigger and bigger because of the tremendous expense involved in this type of operation."

He also said that there appears to be a trend toward white birds and away from bronze turkeys. "When the white bird gets where it can give us everything the bronze bird offers, we will take it," he said. "However, the bronze vs. white bird question is of little or no change except in California, where white birds will be doubled in number."

Dr. Quisenberry also noted that improvements in the appearance and market quality of turkeys have brought "nothing but approval from



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LAB UNDER CONSTRUCTION—Looking over the site of the new Pfizer Veterinary Diagnostic Laboratory at Willmar, Minn., are, left to right: Jack Quinn, Willmar Industries, Inc.; R. J. Molamphy, manager, Willmar Chamber of Commerce; Randall Johnson, chairman, Willmar Chamber of Commerce industrial committee; Erwin W. Rau, mayor of Willmar, and Dr. Hilmer Jones, director of the department of veterinary medicine, Chas. Pfizer & Co., Inc. The laboratory, when completed in early 1962, will offer free-of-charge diagnostic services to all poultry and egg producers in Minnesota. The facility will also be equipped on a small scale to handle diagnostic problems of Minnesota livestock producers.

the consumer" and "turkey growers are grateful to breeders for the improvements in growth rate and feed efficiency of the new strains of birds.

"In realizing these goals, the turkey breeder has sacrificed progress in reproductive performance. Only by improvements in these latter traits can turkeys, if marketed as immature birds, be competitive in price with other meats. In addition, such improvements would lower the cost of production of mature birds."

Bigger Turkeys

Dr. Quisenberry predicted an increase in the size of the turkey of the future, but qualified any hard and fast forecast by saying, "What the bird of the ultimate future will be remains to be determined by need, cost and the imagination of turkeymen."

Turkey Nutrition

Speaking on the "Latest in Turkey Research," Dr. E. L. Stephenson, University of Arkansas nutritionist, said that changes in turkey nutrition are coming fast.

"We have constantly changed the type of feed used to obtain the cheapest gains. We are no longer using the feed industry simply to get rid of certain types of feeds such as oat hulls, millrun and other similar types of concentrates. We are now feeding to produce a cheap bird," he emphasized.

Dr. Stephenson said researchers are finding that different types and strains of birds require different types of rations and that it is extremely hard to try to produce one feed for all of the different strains.

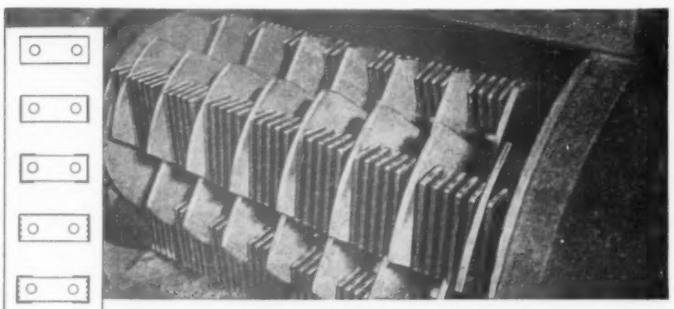
"One fellow found that one of his strains required 17% protein rations and another required only 12% protein," he said.

Research has shown that various changes need to be made, according to Dr. Stephenson. Mineral requirements are a case in point. He recommended the use of rations containing only 1% calcium, as compared to a recommendaton of 2% by the National Research Council.

"No one has yet found that a bird requires more than 1% calcium," he reported. "Although you may say it is cheap to add the additional 1%, it may increase the vitamin D requirement and present other problems and drawbacks."

Dr. Stephenson recommended continued use of present phosphorus requirements, but said he did not believe that use of some new vitamins, as urged by various sources, is needed.

Dr. Stephenson predicted that the next big break in turkey nutrition will come in the field of amino acids. "Many people feel," he said, "that the turkey has the genetic ability to obtain better gains. We believe that



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FEEDSTUFFS

December 30 . . . Outlook Issue

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The 1961 Feedstuffs Analysis Table, showing the analysis of more than 80 feed ingredients, is available in a large size for posting on the wall for handy reference.
The table includes data on protein, fat, fiber, mineral, energy, vitamin and amino acid content of ingredients used in feed formulation.

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SELLIN' SAM — **By Jim Zilverberg**

"I always dreamed about getting with a company as good as this!"

by using new methods to pull down feed requirements this can be obtained."

He said feed nutritionists are in short supply and urged that more youths be guided toward careers in feed nutrition. "We are seeing an alarming trend toward several operators not looking at the industry as a science," Dr. Stephenson declared. "Feed nutrition is not getting the top quality men it needs. They are going into medicine, physics, chemistry and engineering instead."

New President

In a business meeting, the Arkansas Turkey Federation elected Jack Hayes, Red Comb Feeds, Nashville, Ark., as its new president. He succeeds E. E. Bowen, Fayetteville turkey producer.

Other new officers are Dale Parson, Parson Feed Co., Springdale, vice president; Lowell Lankford, extension poultryman, Little Rock, secretary, and Lex Killebrew, Little Rock, treasurer and publicity director.

Named to the organization's board of directors were the officers and Ted Cameron, North Little Rock; Harold Dodgen, Ozark; Gene George, Springdale; Tom Hagan, Rogers; Ed Harms, Russellville; Vernon Magness, Hot Springs; Roy Ritter, Springdale, and J. N. Thompson, Pottsville.

In the live turkey show, Auldie Watson of Elm Springs exhibited the champion tom and Clyde Hudson of Tontitown showed the champion hen in the open division. In the junior division, James Longmate of Rogers had the champion tom and Tommy Bowen of Fayetteville exhibited the winning hen.

In the open division in the dressed turkey show, Auldie Watson exhibited both the champion tom and the champion hen. And in the junior division, Tommy Bowen had the champion tom and James Longmate showed the champion hen.

In an auction following the judging, the top selling bird brought $5 lb. Winner of the light tom class was grown by Walker Pitts of Elkins. It was fed and hatched by Bowen Hatchery of Fayetteville.

Firms with exhibits at the convention were General Mills, Inc.; Arkansas Valley Industries, Inc.; JJC Fowl Furniture; Glendale Turkey Farm & Hatchery, Springdale; Bowen's Turkey Hatchery; Janes-Thompson Turkey Hatchery, Inc., Russellville; American Cyanamid Co.; Robbins-Morgan Incubators, and Harper Veterinary Supply, Morrilton, Ark.

Ed Harms, General Mills, Russellville, was general chairman of the event.

AFMA SERVICE AWARD—Dr. W. Lyle Fitzgerald, right, manager, economic research, The Quaker Oats Co., Chicago, was presented with a plaque recognizing his leadership and service as chairman of the market research committee of American Feed Manufacturers Assn. at a recent meeting in Chicago. Dr. Dale Butz, director of economic research, Illinois Farm Supply Co., Bloomington, Ill., left, chairman of the AFMA market research committee, made the presentation. Looking on is Oakley M. Ray, AFMA director of market research.

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Manufacturers are now using millions of these rugged multiwall bags with the patented easy-opening TAB. Their products are shipped, stored, and handled in Bemi-Strip bags with complete confidence that they will not open accidentally.

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No. 7788—Fertilizer Spreader Booklet

A booklet on bulk fertilizer spreading has been made available to the trade by the Simonsen Manufacturing Co. It contains answers to many problems involved in spreading, according to the manufacturer.

The booklet is a result of the Simonsen Co.'s history in the fertilizer line. The company, in addition to its feed and fertilizer bulk truck body manufacturing facilities, has a long history as a manufacturer of fertilizer and feeds.

In the course of producing fertilizer and delivering it to farms in its market area, Simonsen became interested in spreading bulk fertilizer. After a period of time in using bulk fertilizer spreaders available on the market, Simonsen designed spreaders of its own. These spreaders were marketed first on a local basis, then nationally.

Through day-by-day research, many of the problems inherent in conventional bulk fertilizer spreading equipment have been eliminated in the present line of Simonsen spreaders.

The booklet explains these problems and attempts to give the answer to many of them.

For a copy of the booklet, check No. 7788 on the coupon and mail.

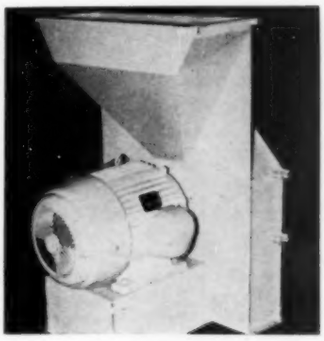
No. 7785—Grinder

The "Orbit Grinder," manufactured by the R. D. Helms Co., is now available, it has been announced.

The grinder operates on a new principle whereby a total screen area of 360 degrees provides full grinding surface around the screen's circumference. A bucket elevator or conveyor carries the ground material from the Orbit Grinder, eliminating the need for fans. This feature is said to eliminate the problems of fines and dust.

The mill is balanced by reversing the direction of motor rotation, thus assuring long life of the grinding edges.

The Orbit is said to require a minimum of maintenance because of its simplicity, the absence of bearings and the relatively few parts.



According to the announcement, Hal Kelley Grain & Milling Co. replaced its hammermill with 40 h.p. motor with the Orbit Grinder powered by a 25 h.p. motor, resulting in a savings in electrical power. The new grinder is said to take care of all of the company's grinding requirements, including milo, barley, corn and screenings in one fourth the time. The Orbit Grinder is available in a range of sizes powered by 5, 7½, 10 and 25 h.p. motors.

For additional information, check No. 7785 on the coupon and mail.

No. 7794—Timer for Dust Collectors

A six-page pamphlet, Bulletin 52-ET, "Operating Instructions and Parts List for the Electronic Timer for MIKRO-PULSAIRE Dust Collectors" is now available from MIKRO-Products, Pulverizing Machinery Co., a division of Martin Marietta Corp. The bulletin provides descriptions of available models, installation instructions, maintenance and trouble-shooting suggestions. For additional information check No. 7794 on coupon and mail.

No. 7793—Hand Truck

A hand truck designed for the easy tilting of loads as heavy as 1,000 lb., and also available with two-wheel safety brakes, has been announced by Valley Craft Products, Inc.

Designed primarily for handling bags of materials stored on pallets, the truck is equipped with a special shoe which automatically locks it into tilting position as the truck is moved vertically against the load, and allows the tipping action to be accomplished with a minimum of effort, according to the manufacturer.

A sizeable savings in pallet costs can be made, it is pointed out, since the double fork design of the shoe allows a very inexpensive pallet to be used since the pallet can be reinforced by a center cleat.

Extremely safe tipping of heavy loads is also claimed as the frame of the truck is in contact with the load at all times. When the load is tilted to an approximate 45° angle it reaches a balance point where the load will actually rest without the operator touching the truck.

Two wheel brakes, also available with the truck, are said to provide safety when moving heavy loads down ramps out of box cars and truck bodies.

For additional information, check No. 7793 on the coupon and mail.

No. 7795—Swine, Turkey Bacterin

A new bacterin containing a purified concentrate of four highly antigenic erysipelas strains has been announced by American Scientific Laboratories, Inc. (ASL). The product, ASL Erysipelas Bacterin, is for swine and turkeys.

By concentrating four strains into its new product, ASL claims broad, dependable immunity against the most common erysipelas-causing bacteria identified in actual field outbreaks.

For additional information, check No. 7795 on the coupon and mail.

No. 7789—New Drug Package

Sulquin 6-50, a product of Dr. Salsbury's Laboratories, has a new package. It is a white, opaque, cylindrical plastic bottle which has printing in blue color topped with a matching blue cap.

Sulquin 6-50 is for the treatment of coccidiosis, fowl cholera and fowl typhoid in chickens and turkeys. It also may be used for bacterial enteritis in swine, shipping dysentery and coccidiosis of lambs.

Each bottle of Sulquin 6-50, containing 30.85 gm. sulfaquinoxaline sodium per 100 cc., medicates 50 gal. of water.

For additional information, check No. 7789 on the coupon and mail.

No. 7791—Force-Feed Vertical Auger

The Cardinal Force-Feed Vertical 6 Inch, a new concept in vertical auger feed and grain conveying, is now available, according to the manufacturer, LML Eng. & Mfg. Corp.

The machine, according to the manufacturer, has been designed to give horizontal capacity to a vertical auger. It consists of a two-bushel hopper with a horizontal auger at the

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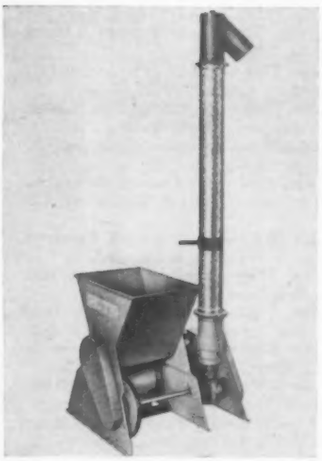


bottom, feeding directly to a vertical auger just outside the hopper. Both augers are driven by one motor. It is said to provide positive pick-up.

Flanged extension sections can be extended to a delivery height from 7-47 ft. This discharge head can function in any 360-degree position by merely turning the auger tube at its base. Its capacity is up to 970 bu. of corn per hour, 905 bu. of beans per hour or 21 tons of feed per hour, the manufacturer states.

For additional information, check No. 7791 on the coupon and mail.

No. 7787—Automatic Dump Scale

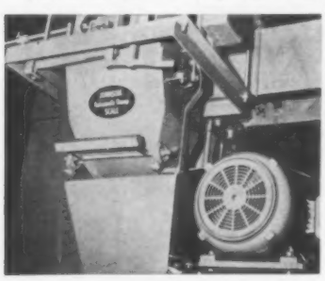
After extensive testing, a new automatic dump scale has been put on the market by A. E. Johnson & Sons, Inc., manufacturer of the Johnson Feed Block Press. The scale was originally designed for use with the press, but also may be purchased separately for any kind of feed mill use, the manufacturer reports.

The manufacturer describes the scale as "simple in design and completely automatic." It has a positive dumping action and is lined with a new combination of plastics designed to prevent feed sticking to the sides of the hopper and assures an easy and complete discharge of feed mixtures. The scale can be set to dump automatically up to a given weight, and is tripped by electric impulse. Dumping weights can be varied simply by the adjustment of one set-screw on the scale.

The scale has a weighing range from 5-60 lb. of a customary feed mixture, but will handle up to 100 lb. of mineral feeds and similar dense materials. Larger sizes can be built to specifications, the producer says.

The manufacturer states that, due to the simplicity of construction, the scale is priced comparatively low. The scale has been tested through five months of continuous operation in commercial use, it was pointed out.

For additional information, check No. 7787 on the coupon and mail.



No. 7786—Palletless Handling System

A new fork truck attachment for the palletless handling of bagged feeds has been announced by the Clark Equipment Co.'s industrial truck division.

The new attachment consists of two scoop-shaped arms which are hydraulically actuated to clamp bags. A side shifting mechanism is also

ANOTHER ELEVATOR *by Hogenson*

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H. E. Lenaburg is manager of the Portland Farmers Elevator Company, Portland, North Dakota. Their modern plant is shown here. Originally quality-built by Hogenson, the six tanks at left were recently added by us.

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What's the secret? Simply the inclusion of 5% stabilized animal fat in a high energy feed ration. In addition, this fat fortified formula boosted egg production more than 10% in normally poor winter months . . . smoothed out the peaks and valleys common with ordinary rations.

Results like these are not surprising when you consider that animal fat contains 2½ times as much digestible energy as any other common feedstuff . . . aids more rapid assimilation and complete conversion of vitamins and other nutrients . . . reduces feed dustiness . . . increases feed palatability.

Your local renderer can give you complete details on tests like this, as well as other research information which shows the way to more weight gain, lower costs per pound of gain, and increased growth rate of poultry, hogs, and cattle, too! Let him show you how to improve your feed results with stabilized animal fats, meat meal, meat and bone meal, poultry by-products, feather meal, and other products of today's scientific rendering industry.

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incorporated to speed pick-up and place-down of loads.

Scoop arms are 45 in. long and can be spread 67 in. wide or clamped to 17 in. Arm slides are fully bushed to insure long, trouble-free operation, the manufacturer states. Maximum side shift of clamps is 25 in. (12½ in. each side from centerline) when clamp opening is 42 in. The attachment has a maximum capacity of 3,500 lb., and is designed to fit all Clark fork trucks.

The palletless handling system, for use with textile bags, was researched by the Textile Bag Manufacturers Assn. and was demonstrated at the 1961 Feed Production School.

For additional information, check No. 7786 on the coupon and mail.

No. 7790—Laboratory Pellet Mill

A portable, compact laboratory size pellet mill, which is said to incorporate a number of improvements over former models has been announced by California Pellet Mill Co.

Designed and built to facilitate testing of material pelletability in the laboratory, the unit is also reported to be capable of providing low cost, small volume production service.

Features announced by the company include a special double-seal enclosure of bearings and lubricants that prevents dust or dirt damage to parts—or contamination of product; easily visible and accessible electrical controls; pellet chamber easily removable for cleaning and die change, and a completely enclosed main drive with necessary conversion parts for four die speeds.

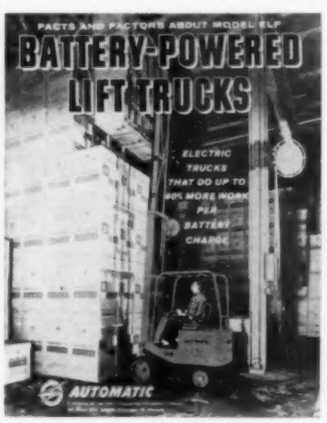
For additional information, check No. 7790 on the coupon and mail.

No. 7792—Brochure on Battery Lift Trucks

"Facts and Factors About Battery-Powered Lift Trucks" is the topic of a new 12-page, two-color brochure, published by Automatic, a division of Yale & Towne Manufacturing Co.

The brochure points out features which it is said enable Automatic electric trucks to deliver up to 60% more work per battery charge while operating in low speeds.

A detailed discussion, complete with documented charts, illustrates


FACTS AND FACTORS ABOUT MODEL ELF
BATTERY-POWERED LIFT TRUCKS
ELECTRIC TRUCKS THAT DO UP TO 60% MORE WORK PER BATTERY CHARGE
AUTOMATIC

how Automatic's "Current Miser Control" operates on its ELF model trucks.

Breakdown photographs in the brochure give outstanding features plus showing many interchangeable parts with companion model gas trucks also available from Automatic. Additional information contained in the booklet includes choices of masts, complete specifications and application photos of the trucks in actual operation.

For a copy of the booklet, check No. 7792 on the coupon and mail.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jotting the appropriate number of the coupon and forwarding it to Feedstuffs.

No. 7727 — Pig starter additive, Thompson-Hayward Chemical Co.

No. 7728 — Molasses pellet mill, Sprout, Waldron & Co., Inc.

No. 7729 — Poultry house plans, Keen Manufacturing Corp.

No. 7730 — Hog disease control guide, Vineland Laboratories, Inc.

No. 7731—Baler twine, Shellbuilder Co.

No. 7732 — Polyvalent bronchitis fraction, Delaware Poultry Laboratories, Inc.

No. 7733 — Protein concentrate, Knudsen Creamery Co.

No. 7734—Dehydrated alfalfa booklet, American Dehydrators Assn.

No. 7735—Formulation service, Peter Hand Foundation.

No. 7736 — Continuous flow grain dryer, Ace Supply & Equipment Co., Inc.

No. 7737—Literature on die cover, Sprout, Waldron & Co., Inc.

No. 7738—Portable moisture tester, Seedburo Equipment Co.

No. 7739—Booklet on dehydrated alfalfa, American Dehydrators Assn.

No. 7740 — Polyethylene valve insert, Union Bag-Camp Paper Corp.

No. 7741—Grain storage building, Butler Manufacturing Co.

No. 7742—Premix convenience pack, Vit-A-Way, Inc.

No. 7743—Portable grinder-mixer, Wetmore Pulverizer & Machinery Co.

No. 7744—Concentrate storage bin, Leach Manufacturing Co.

No. 7745 — Fowl cholera bacterin, Dorn & Mitchell Laboratories, Inc.

No. 7746—Poultry watering trough, L. A. Poekman Manufacturing Co.

No. 7747—Poultry vaccines, L & M Laboratories.

No. 7748 — Automatic clearing valve, Myers-Sherman Co.

No. 7749 — Slide diverter valve, Sprout, Waldron & Co., Inc.

No. 7750—Foot rot bulletin, William Cooper & Nephews, Inc.

No. 7751 — Screw conveyor brochure, Thomas Conveyor Co.

No. 7752 — Bag, carton printer, Minneapolis Sewing Machine Co.

No. 7753—Antibiotic sales premium, Merck & Co., Inc.

No. 7754—Brochure on equipment, Pulverizing Machinery Co.

No. 7755—Make-up air units, Robbins & Myers, Inc.

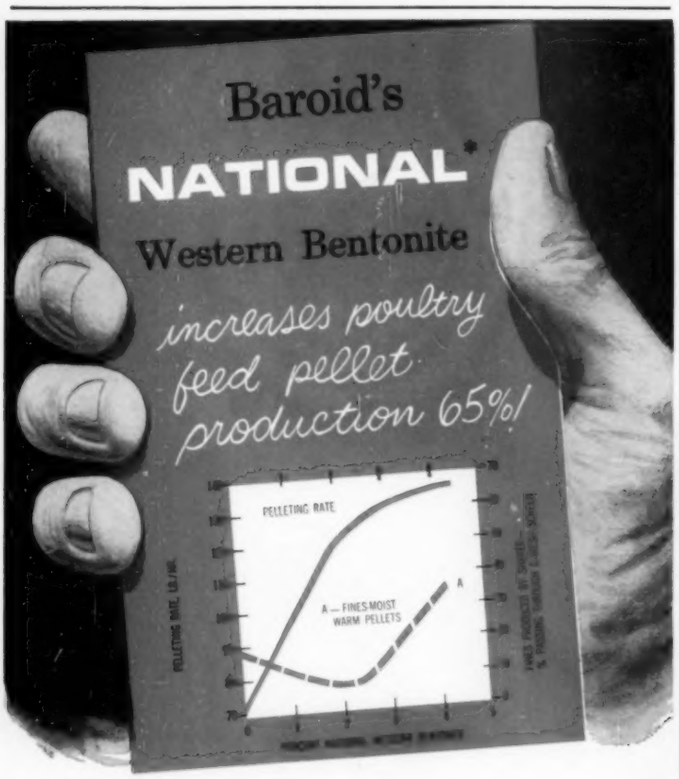
No. 7756—Medication purchase premium, Hess & Clark.

No. 7757—Four vibrators, Viber Co.

No. 7758—Guarantee on water bowl, Starline, Inc.

No. 7759—Folder on jetslingers, Link-Belt Co.

No. 7760—Metering of dry materials, Thayer Scale Corp.



The addition of NATIONAL Western Bentonite to 20% protein poultry rations substantially increases pellet production while reducing "fines." In tests conducted at Baroid Chemicals' Feed Research Laboratories, the concentration of NATIONAL Western required to give both optimum pellet quality and improved pelleting rate is about 2%. This amount gives a 65% rise in pellet production and a 55% decrease in fines from hot extruded pellets.

The accompanying chart shows that the pelleting rate at maximum pellet mill capacity increases substantially when Baroid's NATIONAL Western Bentonite is used as a pelleting aid. Note that as little as 1% NATIONAL Western improves the pelleting rate 30% and reduces fines 33%.

You can obtain more detailed data on the use of Baroid's NATIONAL Western Bentonite in poultry feed pellets by mailing the coupon below.

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Please send me Data Sheet on the use of NATIONAL Western Bentonite in poultry feed pellets.
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COMPANY ..... TITLE .....
ADDRESS .....
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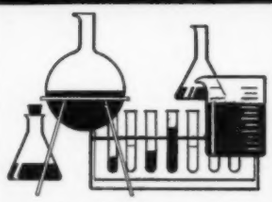

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No. 7763—Feed phosphate film, International Minerals & Chemical Corp.

No. 7764—Hog farrowing unit, Big Dutchman Automatic Poultry Feeder Co.

No. 7765—Tracer technique brochure, Micro Tracers, Inc.

No. 7766 — Feeder specification data, B-I-F Industries.

No. 7767—New mixer model, Rapids Machinery Co.

No. 7768—Larger calf tablet jar, Hess & Clark.

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No. 7773—Pneumatic conveyor for marine use, Myers-Sherman Co.

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No. 7775—Sedimentation test kit, Burrows Equipment Co.

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No. 7778—Baby pig anemia drug, Dr. Salsbury's Laboratories.

No. 7779—Mobile mill development, Seco, Inc.

No. 7780—"Right Angle" Feeding System, Wyatt Manufacturing Co., Inc.

No. 7781—Animal bacterin carton, American Scientific Laboratories, Inc.

No. 7782—Open trough mechanical feeder, Oakes Manufacturing Co.

No. 7783 — Mobile feed plant, Mooers Manufacturing Co.

No. 7784—Bucket elevator catalog, Screw Conveyor Corp.

Chicken Would Be Better Off in A Blast

By Special Correspondent

ATLANTA, GA.—The chicken, it has been found, stands a better chance of surviving fallout from an atomic blast than does man.

The U.S. Department of Agriculture has come up with data that indicates chickens can withstand more roentgens of radiation than man. Whereas, theoretically, about half of the humans exposed to 450 roentgens of radiation would die from the effects, it would take 1,000 roentgens to kill the same percentage of birds.

Scientists have also discovered rats could withstand 800-900 roentgens, and cattle and rabbits can also survive larger doses than man, but not nearly as much as the chicken.

The digestive and psychological make-up of various animals has a bearing, according to some scientists and veterinarians. The higher an animal rates in the order of species, the less resistance it offers to radiation, others say.

Taking the latter theory, there is a belief that pigs and horses would not fare well either in an atom attack.

Teacher Award Given

CHICAGO — Dr. Victor A. Rice, former dean of the School of Agriculture, University of Massachusetts, has received a distinguished teacher award for his work with undergraduates in the animal husbandry field.

The award of $1,000 and a plaque is sponsored by Swift & Co. The announcement pointed out that the winners of the award are selected annually by the American Society of Animal Production, which held its 53rd annual meeting here Nov. 24-25.

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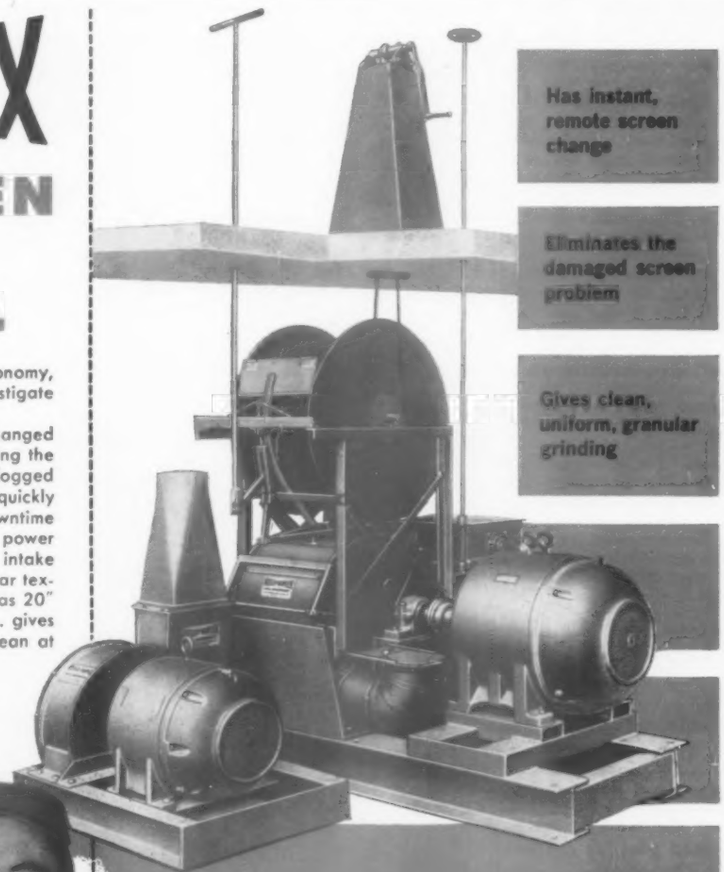
REMOTE SCREEN CHANGE HAMMERMILL

Whether you are interested in speed, convenience, economy, capacity or quality of grind . . . it will pay you to investigate the Kelly Duplex Remote Screen Change Hammermill.

Here are just a few reasons why: • Screens can be changed instantly by a single turn of a crank . . . without stopping the mill . . . and without leaving the service floor • Torn or clogged screens, regardless of the amount of damage, can be quickly and easily removed and replaced without costly downtime • Mill is guaranteed to grind more grain with the same power than any other make—or your money back • Special intake arrangement assures a clean, uniform product of granular texture . . . mill does not whip feed into a floury dust • Has 20" throat—delivers high capacities • Built low to floor . . . gives you a larger pit area • Separate blower keeps mill clean at all times • Heavy steel construction throughout assures top performance and long life under hardest use.

Make your own "point-for-point" comparison. Mail card today for literature and full details. See for yourself how much more you get with a Kelly Duplex Remote Screen Change Hammermill . . . and how much more it will do for you.



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Gives clean, uniform, granular grinding

"In our elevator at New Hope, Ohio, we have a Kelly Duplex Remote Screen Change Hammermill powered by a 75 HP motor on the mill and a 30 HP motor on the blower. It saves us time and steps in servicing customers . . . and gives us a product that looks like it had gone through a grader to get a more even grind. I would recommend this mill to anyone."

Bob Arnaout

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FEEDSTUFFS

JOE BROOKS

BY AL P. NELSON

A Suggestion About Trees from Mike

It was raining hard that cold fall day, and trade at the Brooks Feed Mill was very slow. Farmers were home doing barn work, or other inside chores, many waiting for the rain to cease so they could haul some grain into town to be ground and mixed.

Mike Reitci, a short, squat employee with broad face, black hair and brown eyes, came into Joe's office, a folded clipping in his hand. Mike was the reader among Joe's employees. Others often read comic books and sport pages during lunch hour, whereas Mike loved facts and perused magazines and newspapers for useful information.

"Joe," said Mike hopefully, "there isn't a customer in the mill right now, and I've got something on my mind. Have you a few minutes?"

The brown haired feed dealer looked up from his desk where he had been studying market quotations. He smiled at Mike. "Why, sure, Mike," he said. "Take a chair."

Mike sat down, crossed one leg over the other and unfolded his magazine clipping. "Joe," he said, "we sell and service chain saws, don't we?"

Joe nodded. "Yes, it's a profitable line with us. Many farmers have woodlots, and some loggers come here for saws, too."

"And in our new farm store division we also have wedges, mauls and things like that which farmers with woodlots can use."

"That's right."

Mike nodded as if affirming something. "That's why, Joe, we should be doing something to promote the growing of trees. It is one of our most priceless natural resources. The more trees that farmers grow, the more chain saws, wedges, mauls and other materials we'll sell them. And you said the other night at the sales training meeting that we have to develop sales on related lines, too, in order to get a high volume of business."

Joe smiled. "Well, I'm certainly happy that point got home with you, Mike. I hope the others got it, too. Now what's with trees?"

"I've been reading this magazine about the Tree Farm System that is sponsored by the American Forest Products Industries, Inc., a non profit organization," Mike said. "The clipping says about 20,000 farmers, school teachers, bankers, lawyers and people of many occupations have found that management of woodlands which qualify for the big triangular Tree Farm sign can be lucrative sources of income for the present and security for the future."

"I've heard about that organization," Joe said, leaning back in the ancient swivel chair he liked so much. "They are doing good work. We certainly need to save our trees and grow more of them. Farmers can pick up extra income with a good woodlot and hold soil moisture, too."

Mike Reitci looked at his clipping again. "Joe, it says here that the Tree Farm System is so organized that each state sets up its own tree farm committee composed of industry and state forestry officials. Upon receiving an application from a prospective tree farmer the committee sends out a cooperating forester to survey his woodland. They work together from there."

"Yes, and how could we cooperate on that program?" Joe asked.

"We could find out from the county agent if he would help us get facts for a complete article on this tree farm system," Mike suggested. "I'll

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Give the gift of good health this Christmas. Contribute to Christmas Seals and use the Seals on letters and packages.

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winter worryland . . .

. . . is a land of severe egg production slumps . . . of lingering below-par production . . . of cold snaps and sudden weather changes that constantly threaten to throw birds off-feed and out of lay. These problems increase your feed-selling opportunity. Here's how to make the most of it:

Sell weather-worried "winterizing" their layers

An nf-180 "Two-week Tune-up" snaps birds out of slumps . . . gets them up to full performance in just 10 to 14 days

It's one thing to get a slump-ridden egg producer to switch to your feeding program. It's quite another to have your program deliver such a fast and noticeable improvement that he stays with your feeds.

But it can be done. Here's how:

Start your prospect's flock on an nf-180 booster feed containing 100 to 200 grams furazolidone per ton. Feed this nf-180 booster feed for 14 days to clear up winter stresses and diseases that are holding performance down. We call this reconditioning plan an nf-180 "Two-week Tune-up."

Here's what happens. Within a week, your prospect will see mortality tail off. His birds will look better . . . show more vigor and vitality . . . and feed consumption will improve. By the 10th to 14th day, egg production will substantially jump.

At the end of the two weeks, you'll have made your point about your program . . . and, most likely, you'll have a thoroughly sold new customer. Many feed dealers keep an nf-180 booster feed on hand specifically as a "new business" feed . . . as a "trial" feed to demonstrate the superiority of their program.

Next Step: FPI plan

After the nf-180 "Two-week Tune-up" has his birds at full performance, your prospect will want to

bet he'd cooperate. Then we could publish the article in our mimeographed bulletin, telling farmers who to apply to for more information."

"Hmm," said Joe. "That really would be a fine goodwill building gesture. It wouldn't cost us much. Might get many farmers to thinking of spare land they have to convert into woodlands."

"Then I was thinking," Mike said, "that maybe this mill could put on a big forestry meeting sometime during the winter—right here at the farm store. Surely the county agent would help. Maybe he could get a state forester to attend and talk to the farmers. The forester could show some forestry movies and explain the program."

"And answer questions."

Mike nodded. "Yes. I am sure, Joe, that with publicity and the county agent's cooperation we could get a fine turnout, and really stimulate tree planting in this trade area."

"Uh, huh," Joe mused. "And I don't see why we couldn't tie this in with an actual power saw demonstration day, too. We could get some logs and cut them up with power saws—might even have one log, too, in the store. Maybe we might sell some chain saws."

Mike grinned. "Sure, I don't see why we can't. And we could keep plugging the tree farm idea in the bulletin every month."

"We certainly could," Joe said. "And for such a meeting, I think I would also invite the bankers of the area, school teachers and vo-ag instructors. They'd probably like to know more about the program."

Mike Reitci chuckled. "I'll bet they would, too. Joe, aren't you glad you made a big basement meeting room under the new farm store addition? We can use it for this tree meeting, and take care of 100 people and also have room to serve them coffee and sandwiches."

"I certainly am glad I have that room," Joe said. "It has only been open a month and I have lots of requests from farm and other groups to use it. I feel that when I get some nice rural scenes painted, I can post them on the walls, too, along with some well thought out signs on poultry and livestock feeding."

"I've heard a lot of favorable comments from customers on that room," Mike said. "One man said his farm group wants to meet here once a month, because all they have to do is bring their own coffee and doughnuts and films. 'Joe has a movie projector' one man said, 'and comfortable quarters. This is the place for us.'"

"Thanks, I'm glad to hear that," Joe said. "And the more I think of it, the better I feel about your tree farm meeting. It's something different and practical. I think farmers will come to hear the story. Thanks, Mike, for bringing in the idea."

Mike grinned. "I finished just in time, Joe. I see two farm trucks driving in. I'd better get out and help the boys mix. Even the way it is, they'll think I took an awful lot of time going to the restroom."

5 Speakers Announced For Washington Event

SEATTLE—Five speakers have accepted invitations to appear on the annual convention program of the Washington State Feed Assn. Feb. 16 at the Benjamin Franklin Hotel here.

Completing arrangements for the meeting is Leo Westerbeck, general convention chairman. He is being assisted by Jack White and Don McClintick.

Speakers who presently have confirmed their engagement include James T. Ralph, assistant secretary of agriculture, Washington, whose subject will be "The Feed Grain Program"; Edward Sanstrom, Small Business Administration, Seattle, speaking on "What the Small Business Administration Has to Offer the Retail Feed Dealer and Miller"; Lynn Bramkamp, Foremost Dairies, San Francisco, on "Federal and State Milk Controls and Some Comment on Recent State of Washington Legislation"; R. Franklin Thompson, president, University of Puget Sound, "Outstanding Thinking Tomorrow," and William Walkinshawn, director of public relations, Heisdorf and Nelson, Seattle, topic not yet announced.

The association-sponsored Pacific Northwest Feed Mill Production School will be presented Feb. 14-15 at at Benjamin Franklin Hotel.

Hercules to Build Nitrogen Facilities

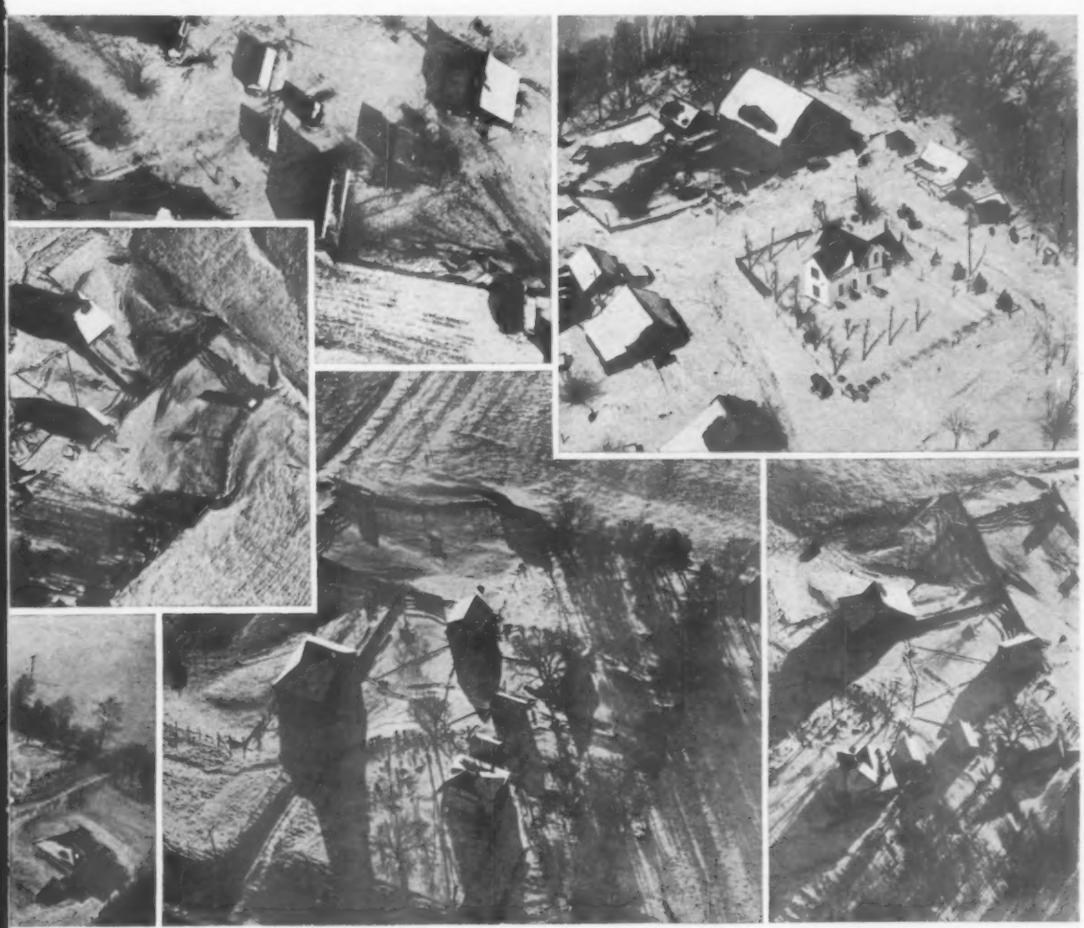
LOUISIANA, MO.—New facilities for the manufacture of nitrogen chemicals will be built by Hercules Powder Co. at its Missouri Chemical Works here, it has been announced.

Hercules says that through the integration of existing facilities and the construction of new ones, ammonia will be further processed to provide urea, urea solutions, urea ammonium nitrate solutions and ammonium nitrate-ammonia solutions. In addition, two grades of prilled ammonium nitrate will be produced to supply both agriculture and explosives markets, the firm stated.

The firm said, "The multi-million dollar expansion program, which is to get under way immediately, will effectively integrate the plant and its facilities in the production of nitrogen derivatives."

Hercules noted that it purchased the Missouri facility from the federal government in 1954 and has expanded it each of the last six years to the point where it will now become the largest complex of the firm's Synthetics Department in terms of diversification of products.

The new facilities are expected to be completed and on stream by early 1963; however, production of some of the nitrogen derivatives will commence as early as mid-1962, the announcement concluded.



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Helps birds 2 ways

The basis of the FPI Program — a continuous low-level of nf-180 (25 grams furazolidone per ton of feed) — does two things. First, it keeps stresses from getting a foothold again . . . protects against serious laying slumps.

Less noticeable but equally important, a continuous feeding of nf-180 frees birds from *constant disease drag* — the subclinical infections scientists say hold down performance in most unprotected flocks.

The principle behind this nf-180 program is simple. An nf-180 "Two-week Tune-up" clears up disease drag and winter stresses . . . brings birds to the peak of production. Then, the nf-180 *Full Performance Index* plan *keeps* performance high. Combined, the nf-180 "Two-week Tune-up" and the FPI plan give you today's most convincing demonstration of feed-power.

Hess & Clark district managers and salesmen can give you the facts you need to help your customers to better egg profits. Write, wire or call to set-up an early appointment.

NT-1-10

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HESS & CLARK ASHLAND, OHIO Division of Richardson-Merrell Inc.

ANY WAY YOU SLICE IT ! a Nichols cross produces a higher yield

Nichols POULTRY FARM, INC. BRUNSWICK, MAINE

Controlled Ventilation of Broiler Houses Discussed at Servicemen's Short Course

By Special Correspondent

GEORGETOWN, DEL.—Controlled ventilation, the experts agree, is the coming thing for the broiler house.

At a broiler servicemen's short course in Georgetown, controlled ventilation as a part of the broiler house of the future was discussed. How it should be accomplished is not a matter of agreement among the experts, it was pointed out.

A. V. Krewatch, agricultural engineer, University of Maryland, listed factors which illustrate the need for controlled ventilation:

1. The requirement of 1 cu. ft. of air per minute for each pound of live weight in the house if the temperature is between 60 and 70°. More air is needed if the temperature rises, less if it is cold.

2. Water removal. Mr. Krewatch said a 3½ lb. bird will give off 0.45 lb. of water per day. A thousand birds will give off 450 lb. of water per day which must be removed. It requires 1,100 BTU's to evaporate a pound of water. Fresh air could do the same job and save this much heat. If 1,900 cu. ft. of air passed through the house, a pound of water would be removed, he said.

To the grower's advantage, Mr. Krewatch said, is the normal flow of air. A house will have five changes of air per hour if the wind is blowing 15 m.p.h. But, just to remove the moisture alone, the house must have 7.3 changes of air per hour.

Fresh air, then, serves two purposes—birds must have it to breathe, and air removes moisture.

Two other considerations in controlled ventilation are that houses leak heat and birds give off heat.

Present houses in Delmarva satisfy the fresh air and heat needs only by guess, it was pointed out.

Insulation will save heat. Mr. Krewatch said that if the ceiling of a broiler house has three inches of mineral rock insulation and the sides have 25/32 in. insulation, heat requirements can be cut to only a third of that needed in conventional houses.

Fans must be used to produce air change. Two controls are necessary, one to turn the fan on when a certain temperature is reached and a second control to run the fan so many minutes per hour.

The engineer said it is not so important where the fans are located, but it is essential to have the path of cold air properly entering the house.

Ventilation Experiment

James Nicholson, poultry extension specialist, also of the University of Maryland, has been conducting a field experiment in mechanical ventilation. He has designed a system using equipment either already available or readily available. The system is one of a "do-it-yourself" nature.

Explaining the system to the group of some 200 servicemen, Mr. Nicholson said air circulation depends on summer fans that the grower is apt to already own.

The fans are encased in a wooden box and fastened to the rear wall of the broiler house.

A length of stove pipe, long enough to reach the center of the house, is attached to the box. On the other end of the pipe a "T" is attached so two short lengths of pipe can draw stale air about 18 in. above the floor. Two short lengths of pipe are used instead of one so that air can be drawn from a larger area.

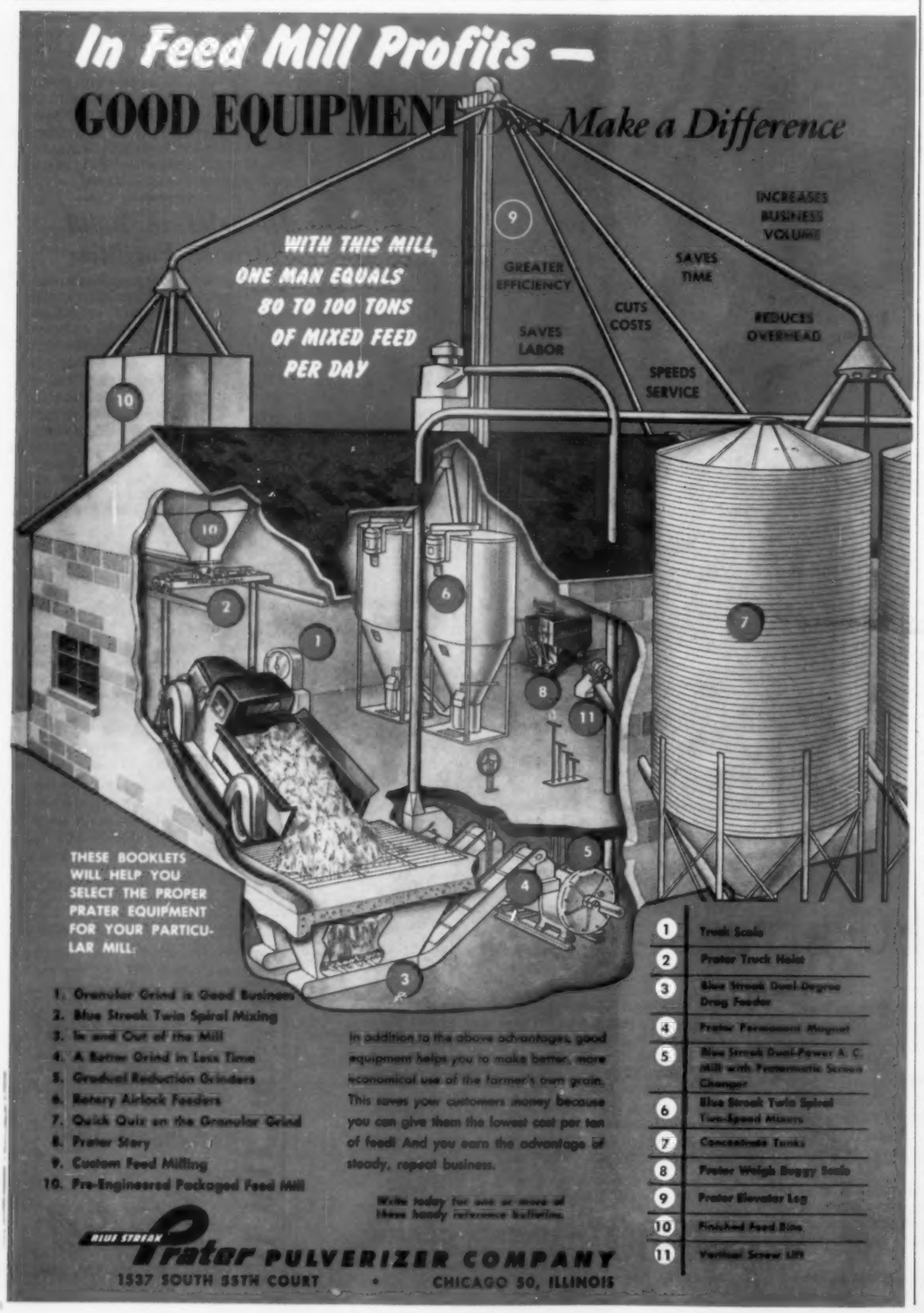
Mr. Nicholson said that only a two-inch slot along the front of the house is necessary for the fresh air intake. Using this system, the cold air entering the room meets the warm air being expelled and is partially warmed, thereby saving fuel. Air, after it has circulated around the room and picked up moisture, is expelled by the fan on the rear of the house.

This system also uses two controls, he said, a time clock and thermostat.

Tests, so far, show that this simple system works well. It is labor saving since no time is needed to open and close windows. A saving in fuel pays for the electricity, he said.

"We must move in this direction (using controlled ventilation). We must move fast but cautiously," Mr. Nicholson said.

Mr. Nicholson plans more tests. He said he would like to see some broiler growers try this system in a room or two to see how they like it.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WITH THIS MILL, ONE MAN EQUALS 80 TO 100 TONS OF MIXED FEED PER DAY
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GREATER EFFICIENCY
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Kansas Soya Reports Improved Earnings

EMPORIA, KANSAS — Kansas Soya Products Co., here, has reported an over-all improvement in operations and finances during the fiscal year ended Aug. 31.

The firm had net sales of $10,383,-181 compared with $9,007,700 a year earlier. Net income was $302,170, equal to 51¢ a common share, compared with $220,938 or 35¢ a share a year before. Earned surplus was increased from $928,810 to $1,186,-421 during the year and of the amount $273,071 is restricted for the payment of common dividends, resulting from the omission of quarterly preferred dividends April 15, 1952, and subsequent quarterly dates through Oct. 15, 1958, the firm stated.

According to the statement, net working capital Aug. 31 was $1,524,-760, against $1,398,768. Cash of $615,-593 was greater than current liabilities of $395,484. Notes receivable from an affiliate totaled $850,000, against $400,000 a year ago. Inventories were reduced from $799,624 to $292,364.

McCabe Grain Company Limited
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LONDON, ENGLAND
Schwartz & Co.,(Grain) Ltd.
Victoria Products and Grain
(overseas agents) Ltd.

Question and Answer Feature Set Again for New Hampshire Event

DURHAM, N.H. — A question and answer feature popular at last year's University of New Hampshire Poultry Health Conference is on the program for the 11th annual conference, slated for Jan. 31 and Feb. 1 in the Memorial Union Building, Durham.

"Ask the Experts," a feature introduced last year in which pathologists answer diagnostic lab questions in small, informal group discussions, will be a first day event. Six outstanding pathologists will participate, according to Dr. W. C. Skoglund, poultry science department chief, who has released program details.

Conference talks will include: Dr. T. N. Frederickson, veterinarian, U.S. Department of Agriculture, regional poultry research laboratory, East Lansing, Mich., "New Information on Leucosis"; Dr. W. R. Dunlop, research pathologist, University of New Hampshire, "Setting the Record Straight on the CRD Complex."

His talk will be followed by a panel on "New Methods of Controlling the CRD Complex," featuring Dr. Grover Cloyd, Hess & Clark, Ashland, Ohio, who will explain the secondary invaders phase and Dr. Carey M. Parrett, Eli Lilly & Co., Indianapolis, the PPLO phase.

Dr. Robert Gentry, Pennsylvania State University, University Park, will speak on "Recent Developments in the Control of Avian Encephalomyelitis"; Dr. Monte N. Frazier, University of Connecticut, Storrs, will speak on the topic, "Studies on Resistance to Capillaria Worm Infection"; Dr. S. A. Edgar, Auburn University, Auburn, Ala., will discuss "The Control of Coccidiosis"; Dr. Floyd Markham, American Cyanamid Co., Pearl River, N.Y., will speak on "New Information on Laryngotracheitis Control," and Dr. John Fahey, Chas. Pfizer & Co., Groton, Conn., will discuss "Feed Medication—Why the Problem?"

A final panel, moderated by Dr. Frank Witter, University of Maine, Orono, will feature all speakers answering questions from the audience.

A banquet the evening of Jan. 31 will be followed by an illustrated talk on "Wild Africa" by the team of Lorus and Margery Milne, University of New Hampshire staff members who have photographed wild animals in their natural habitat all over the globe.

Copies of the complete program and registration blanks will be available from the UNH poultry department after Christmas.

SYMPOSIUM PARTICIPANTS—Pictured at a research symposium of the department of poultry science, Rutgers University, New Brunswick, N.J., are, left to right, Dr. Hans Fisher, Rutgers nutritionist; Dr. J. B. Quinn, Dartmouth College, Hanover, N.H., and James Miller, Feedstuffs, New York. Closer relationships between industry and the university was the aim of the meeting, to which about 30 pharmaceutical houses, food companies and others sent their research men. How cooperating research can serve industry was pointed out, and research currently underway at Rutgers was outlined. (Feedstuffs, Nov. 25, page 27.)

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NEW FACILITIES—This photo shows the new facilities of Greeley Mill and Elevator, Greeley, Iowa. At the left are the warehouse facilities. In the center is the feed mill, and at the far right is the firm's office building and store. The new facilities replace a burned out plant.

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Performance Proof Tests, Service Build Hog Feed Sales for Firm

By Al P. Nelson
Feedstuffs Special Writer

Quality feed, service and proof that the feed will produce pork cheaper make for a program with appeal to the hog man.

And the Greeley (Iowa) Mill and Elevator is a firm which has such a program. This firm, operated by Mr. and Mrs. Albert Heuchelin and their sons, Wayne and Bruce, has demonstrated its hog feeding program's economy to numerous feeders in its area through use of split-test proof projects.

The Heuchelins say that their feeds and feeding programs can cut the cost of producing pork 50¢ to as much as $2 per 100 lb., depending on management.

The company's program is one which emphasizes complete pelleted feeds and feeding programs. The firm does some custom milling, but emphasis is put on the complete feeds and feeding programs which it provides, and on its cash grain buying policy. Some 95% of the firm's output is in pelleted feeds.

Albert Heuchelin, owner and manager, explains that the Greeley firm buys its pre-starter and pig starter pelleted feeds from a major supplier (Hales & Hunter) and produces the rest of its swine feeds in its own mill, using the supplier's concentrates. The complete feeds produced in the Greeley mill are called Triple H feeds.

Wayne Heuchelin, sales manager, says that he visits the leading hog men in the area, explains the value of Triple H pelleted feeds and, then, tries to get the feeder to put his hogs on a 30-60 day feeding test. The hogs are weighed before the test and after, and proof sheets are worked out on the feeding program. He reports that about 90% of the feeders then become regular patrons of Greeley Mill and Elevator.

"We have a relatively simple basic program," the young sales manager says. "We offer to prove through a test that our pelleted feeds will lower the cost of producing pork. The results speak for themselves."

For the service part of the program at Greeley Mill and Elevator, the firm has a hog service man who assists Wayne Heuchelin with weighing of hogs. This service man also adjusts hog feeders and waterers for feeders and talks over hog raising problems. The Heuchelins report that feed customers appreciate this extra service, just as they like to be shown accurate records of the feeding test.

Test Proof Sheets

These proof sheets on feeding tests and other feed information are called to the attention of hog men through some newspaper and direct mail advertising and also in three to four hog feed meetings annually.

These meetings are usually held in churches or local halls, with an average of about 50 farmers attending. Cost of pork production methods and evidence are stressed, and hog men are encouraged to ask questions about specific hog feeding problems. Wayne Heuchelin says that one such meeting attracted 170 hog raisers. Hales & Hunter Co. assists Greeley Mill & Elevator in promoting these feeder meetings.

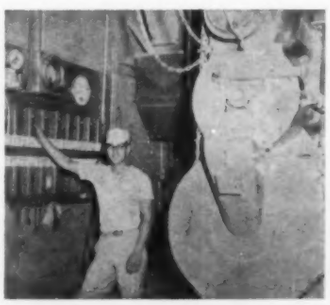
Sixty per cent of the farms in this region are owned by the occupants, says Wayne Heuchelin, and the average hog herd is about 300. A majority of the hog raisers farrow sows instead of buying feeder pigs.

Wayne Heuchelin has a 35 mm. camera which he uses in taking pictures of hog raisers for use in proof sheets which are often posted on the showroom walls along with feeding records of specified numbers of hogs. Where photos of owners and hogs are required for newspaper ads, he usually calls in the newspaper photographer to handle the job.

The Heuchelins feel that a hybrid hog crossed with a regular hog is the best market hog from a production standpoint. Right now, the Greeley firm is raising 11 purebred Hampshires and is keeping accurate records on the feeds and weights. Some of these hogs will be awarded to 4-H and FFA members on Appreciation Days to be held in the fall. Awards will be made on a merit basis, Wayne Heuchelin says. The Greeley firm also plans a live hog display at the county fair, with a showing of the old and the new ways of feeding hogs.

Goodwill Builder

A goodwill building event in which the Greeley Mill & Elevator participated was in an agricultural extension fitting and grooming demonstra-



CONTROL PANEL—Here at one of the mill control panels is Bruce Heuchelin. The pellet mill can be seen at the right. All controls are clearly marked.

FARM SUPPLIES—Farm supplies are displayed attractively in the new store of the Greeley Mill and Elevator, Greeley, Iowa.

tion at nearby Manchester, Iowa. The Heuchelins and Hales & Hunter furnished a dinner for 175 farm boys and girls and their dads, as well as a barrow and a steer for fitting and grooming.

"Events like this build goodwill and help a feed firm contact many customers and prospects," says the sales manager. "It ties in with our advertising and feeder meetings so that we are able to reach many farmers with our sales message."

Seventy-five percent of the feeds which this firm produces are sold to hog raisers, says Albert Heuchelin. To produce the volume of feed needed, the Heuchelins needed a large, modern mill. Such a mill was built following a fire which destroyed the former mill May 26, 1959.

New Mill Planned

"It was at this time that we reviewed our entire feed merchandising operation," says Mr. Heuchelin. "So long as we had to rebuild, we planned to expand our production and arranged to manufacture pelleted feeds for our customers so that we could compete with any other type of feed firm. The results to date have shown that this program is working out very well."

The new mill is 32 by 45 ft. One warehouse is 44 by 60 ft., and another is 44 by 24 ft. For grinding grain the firm has a 50 h.p. Jacobson hammermill, with 25 h.p. blower; there is also a Sprout-Waldron attrition mill. All cow feeds are ground through the Jacobson, and most other feeds go through the Sprout-Waldron, says Mr. Heuchelin.

There are three mixers, a 2 ton Marion, a 2 ton Fords and a 1 ton Prater. The California pellet mill is on the first floor, the cooler in the basement and the shaker high up. The pellet mill is 100 h.p. and makes a 3/16 in. pellet. Steam for making of pellets is provided by a 30 h.p. Nebraska boiler in the basement area. In the basement, too, is a fat container with 5,000 lb. capacity, a molasses conditioning tank, and a 6,000 gal. molasses storage tank.

Other equipment includes a 50 ft. fifty ton Howe recording scale, a 2 ton hopper, push button panels, Richardson automatic bagger, Whizzer conveyor belt, Union Special sewer, Fords Hoist, two Fords weigh buggies and a Fords sheller. There are two Huss and Schlieper elevator legs, one 93 ft. high, and one 75 ft. high and one Universal leg, 75 ft. high.

In the truck receiving area there are two dump sinks. Grain for shelling and for storage goes into one pit, and grain for grinding goes to the hammer in the second pit.

Rail car unloading facilities include a conveyor belt. All bulk feeds are received from hopper and box cars. Bag shipments come from Hales & Hunter by truck and rail.

Storage Facilities

The big mill has 33 bins, and five more will soon be added. Over the drive are 13 bins for loadout, which permits the making up and storing of sizable orders in advance for pick-up or delivery.

There are also nine 7 ton bins, five 30 ton bins, four 15 ton bins and one 30 ton bin for oat hulls. Delivery equipment includes a 6 ton Henderson bulk truck, two grain trucks and one pickup truck.

The Northwest Steel Co., Fort Dodge, Iowa, erected the mill. Wayne Heuchelin, who was an electronics technician with the Air Force, and his brother, Bruce, did the wiring, plumbing and steamfitting in the plant.

Feeding Record Signs

The office of the company is located in a 40 by 30 ft. steel building near

HOG SCALE—An important part of the Greeley Mill and Elevator proof project program is the weighing of hogs on the farm, and this moveable scale facilitates this work. Here the service man disinfects the scale as he does after each use.

MIXER CONTROL—One of the mill employees is shown here at the control panel for two of the three mixers in the mill which are also visible.

PROOF RECORDS—Proof records like these are posted on the display area wall at Greeley Mill and Elevator. Accompanying many of the records are photos of the feeders involved.

SIGNS—Signs like these in the display area of the Greeley Mill and Elevator, Greeley, Iowa, explain the firm's pelleted feed program, feeding trial system and policy on purchasing cash grain.

BUSINESS CONFERENCE—A business conference at Greeley Mill and Elevator, Greeley, Iowa, involves the Heuchelin family. Seated behind the desk are Mr. and Mrs. Albert Heuchelin. Sons Bruce (seated) and Wayne are on hand to give their views. Mr. Heuchelin is the owner and manager and Mrs. Heuchelin is office and finance program manager. Wayne is sales manager and Bruce is mill manager.

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A BETTER IMAGE—A panel discussion on effective use of credit and a talk on statesmanship of the trade toward federal programs were among the features of the program at the annual convention of the Western Grain & Feed Association of Iowa in Des Moines. The panelists, from left to right, are: Don Bruntlett, Bruntlett Elevator, Gowrie, Iowa; Don Boyd, Lakota (Iowa) Farmers Elevator Co.; Bob Zinn, Mason City, Iowa, Allied Mills, Inc., moderator, and John Guise, Delmar (Iowa) Grain & Feed, Inc. At the right above is Al Oliver, executive vice president, Grain & Feed Dealers National Assn., Washington, who spoke on statesmanship of the trade. Theme for the program was "Creating a Better Image."

the mill. It has a showroom and the walls here are posted with feeding record signs, resulting from Greeley pelleted feed tests. These cardboard signs carry the picture of each feeder and are easy to read. They are proving to be of great interest to hog raisers who are contemplating going on the Triple H program. The showroom also has wall displays of farm supplies. Tanks and waterers are shown in one section of the room.

Mrs. Heuchelin has charge of the office and the finance program which includes the financing of feed for livestock from birth to market. Quite a number of hog raisers are taking advantage of this Hales & Hunter finance plan to aid them in raising large herds, the Heuchelins say.

With the new mill and the pelleted feed program, the Heuchelin family has a business of the modern type which is fashioned to handle the feed needs of both small and large feeders at a competitive cost.

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"Russia," cried the Soviet agricultural expert at a Paris meeting, "is an agricultural paradise with three wheat crops a year." Incredulous listeners demanded how this could be.

"It's easy," he explained. "We have one from Hungary, one from Czechoslovakia and one from Russia."

◆ ◆ ◆

Sharply the doctor said: "Petrified, it disgusts me the way you sit here asleep, day after day and never get any exercise!"

"Exercise?" echoed the listless one. "I git quite a little exercise, Doc. Haven't you ever noticed how I twitch in my sleep?"

◆ ◆ ◆

The one-ring circus was visiting a town in the hills. The folks there recognized all the instruments of the band except the slide trombone.

One old settler watched the player for quite some time, then said, "There's a trick to it; he ain't really swallerin' it."

◆ ◆ ◆

A lawyer was questioning a farmer about the truthfulness of a neighbor.

"Wal," said the farmer, "I wouldn't exactly say he was a liar, but I tell ye, when it comes time to feed his hogs, he has to get somebody else to call 'em for him."

◆ ◆ ◆

Husband and wife were having a fearful row. In desperation, the husband said heatedly, "Anyway you let me believe you were a young chick when we were courting, you old hen!"

To that came the reply: "Well, you've got to give me credit for getting the worm!"

◆ ◆ ◆

Two men were commenting on a friend's bad luck at the horse race. "Funny," said one, "how Ed is so lucky at cards but does so badly at the track."

"Funny nothing," retorted the other, "they don't let him shuffle the horses."

◆ ◆ ◆

"Why, in some parts of the world you can get a pound of coffee, two loaves of bread, a quart of whiskey and a wife for three dollars."

"Huh—can't be very good whiskey."

◆ ◆ ◆

Guard: "Halt! Who goes there?"
Rookie: "Aw, you wouldn't know me. I just got here today."

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Rations and Supplements fortified with these Vitamin-Mineral Pre-Mixes are formulated to provide nutritional elements lacking in the grains. These Pre-Mixes contain the recommended levels of Vitamins, Minerals and Antibiotics—also the seven vital Trace Minerals so necessary to assure steady, rapid growth and continued high production under stress conditions.

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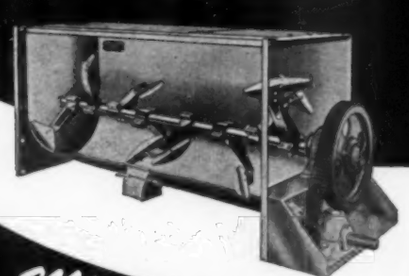

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Study by Nutrena Scientists Offers Pig Immunity Data

CHICAGO — Three Nutrena Feeds scientists have reported that experiments they conducted prove that the period of high susceptibility to disease among baby pigs is longer and much more variable than heretofore suspected.

The researchers, Dr. R. A. Eversole, P. W. Peterson and Dr. F. C. Wingert, revealed their findings in a technical paper presented before the American Society of Animal Production here Nov. 24.

Thirty-three pigs in six litters were involved in the two-stage experiment, which lasted for 34 weeks. Each group was kept under test conditions until it reached marketing weight at 27 weeks of age. The experiments were conducted at the Cargill-Nutrena research farm near Elk River, Minn.

Researchers previously had suggested that infant pigs inherit their resistance to disease by pre-birth transmission in the placenta. The Nutrena scientists claim their tests show that this is not the case, but that the immunity is acquired from the sow's colostrum. They also maintain that the length of the pigs' "immunity gap"—a period of high susceptibility after weaning—is not the same for all, or even most, diseases, but is of a different length for each disease-causing agent.

The scientists also found that the immunity gap for the whole range of diseases, beginning "somewhere around the third to seventh week," lasts at least until the 20th week, at which time the pigs begin to develop their own resistance. The gap previously was believed to be of a much shorter and invariable duration, the scientists said.

They said their experiments also further proved the value of isolated farrowing units as protection against the spread of disease during the immunity gap period.

James C. North, Nutrena president, said the tests "add much to what is known about how much general disease resistance we can expect in normally nursing pigs." He added that Nutrena would put the new information to use in selecting additives for its swine feeding programs.

Illinois Agricultural 2-Day Forum Set

URBANA — Changing distribution patterns in the marketing of feed, fertilizer, buildings and equipment will be featured in sessions of the University of Illinois Agricultural Industries Forum Jan. 30-31. All sessions will be in Garner House, a new men's residence hall on the university campus.

Among presentations Jan. 30 will be one by Dr. R. J. Mutti, University of Illinois, on "Factors Influencing Changes in Farm Supply Marketing Systems."

Among industry leaders who will present their views on "Appraising the Market Structure for Farm Supplies," will be Oakley Ray, director of market research, American Feed Manufacturers Assn., Chicago.

In a morning session Jan. 31, those interested in feed and grain marketing will meet together. P. C. Winslow, Illinois sales manager for Ralston Purina Co., Bloomington, will speak on "Lessons From Our Grain Banking Experiences." Dr. T. A. Hieronymus, University of Illinois professor of agricultural marketing, will report on "Appraising Price Behavior."

In addition to special interest sessions, general sessions will offer topics of interest to all businessmen. Further details are available by writing to University of Illinois, Department of Agricultural Economics, 305 Mumford Hall, Urbana.

Alabama Feed Sales Decline in October

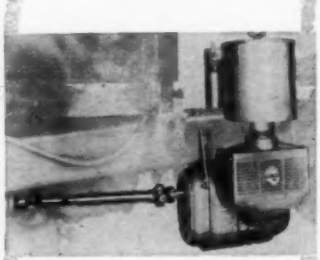
MONTGOMERY, ALA.—Over 2,000 tons less feed were sold in Alabama during October, 1961, compared with the same month of 1960, the Alabama Department of Agriculture and Industries **has reported.**

This year's total was 121,845.85, compared with 124,033.86 in 1960 during October, according to reports from manufacturers.

Poultry feed, the largest single variety of feed sold, was nearly 2,000 tons ahead of 1960, however. The October, 1961, figure was 73,546.80, compared with 71,798.79.

Other categories, listing 1961, then 1960, are:

Horse and mule, 1,360.65, 1,346.87; hog, 5,999.42, 5,757.15; dairy, 10,953.61, 10,358.25; oil meals, 15,399.38, 17,864.45; cereal by-products, 1,387.04, 2,250.96; all other feeds, 11,529.99, 12,696.69; molasses, 1,668.96, 1,960.70.



SUTORBILT SERIES 88 BLOWERS FOR FAST, LOW-COST HANDLING OF FEEDSTUFFS

On bulk-feed delivery trucks or on-the-farm processing units, Sutorbilt Series 88 positive pressure blowers provide constant velocities for pneumatically conveying all types of dry feedstuffs... at tons-in-minutes speeds... up the steepest inclines, even vertically.

Sutorbilt Series 88 blowers are practically maintenance free—thanks to special features such as heavy-duty anti-friction bearings, wide-face steel helical gears, and the special timing hub.

Standard units available in capacities to 2300 cfm, and pressures to 15 psig. Supplied packaged for power take-off, or with gasoline or electric drive... there's a "Series 88" blower for long, dependable service in your feed handling equipment or operation.

For detailed specifications, send for Bulletin S88-A, Dept. C.

Sales representatives in principal cities

4484
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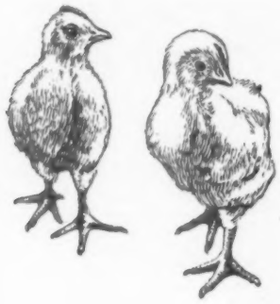
SUTORBILT CORPORATION IS WELL BUILT

2906 EAST VICTORIA ST. • COMPTON, CALIF.
Subsidiary of Fuller Company • Catasauqua, Pa.



(METHIONINE HYDROXY ANALOGUE) FROM MONSANTO

MHA*

MHA*... Your economical source of supplemental methionine

You can save between $3.00 and $5.00 in ingredient costs per ton with MHA supplementation of your broiler feeds. To meet the broiler price squeeze, MHA economically can replace more costly amino acid sources. It actually can save you money. Methionine hydroxy analogue is a vital "trigger" in the build-up of amino acids into tissue protein. Broiler feed formulators can boost the methionine level with supplemental MHA and increase feed efficiency *as much as five to ten percent.*

MHA*... provides formulators unprecedented flexibility, enabling them to:

Capitalize on fluctuating ingredient prices, obtaining high-efficiency mix at lowest possible cost.

Widen C/P ratio, adding a higher percent of digestible nutrients, without upsetting energy/protein balance.

Deliver optimum feed efficiency with less total protein and reduced total cost per ton.

Comprehensive literature on MHA is available by mailing the coupon.

Monsanto®

* Trademark for Monsanto's Methionine Hydroxy Analogue. Use of methionine hydroxy analogue in poultry feeds—without regard to source of supply—is covered by Monsanto's U.S. Pat. No. 2,745,745.

Monsanto Chemical Company
Agricultural Chemicals Division
Dept. 7532, St. Louis 66, Mo.

Please send me additional information on how I can benefit from Monsanto MHA.
I do..... do not..... use supplemental methionine in my present ration.

Name.....

Company.....

Street.....

City..... *State*.....

Weigh up to 50-pound packages with accuracy and speed

EDTBAUER-DUPLEX
Automatic
NET WEIGHERS

Accurate, simple to install and operate—and requiring almost no maintenance—Edtbauer-Duplex Weighers give years of the most satisfactory service. Fifty-pound bags of feeds, including pellets and crumbles, are accurately weighed. Smaller models efficiently handle pet foods, rice, corn meal and other cereals, pancake and whole wheat flours, and other mill products in packages from two to 50 pounds. Our engineers will be glad to help you plan a practical, economical installation.

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New York 36—JABEZ BURNS AND SONS, INC.—600 W. 43rd Street
San Francisco 5—TEMPO-VANE MFG. CO.—330 First Street
Dallas 2—J. B. WILLIAMS—1026 Young Street

SEEK LOWER RATES—R. H. Strickler, right, Rocco Feeds, Harrisonburg, Va., chairman of the Virginia State Poultry Federation's freight rate committee, is pictured discussing feed freight rates with Leonard N. Conyers, left, and S. Mason Carbaugh. Mr. Conyers is transportation consultant for the Virginia Department of Agriculture, and Mr. Carbaugh is VDA transportation section marketing agent. The three made a report on proposed Southern Railway freight reduction at the annual convention of the Virginia State Poultry Federation.

BUY AND SELL THROUGH FEEDSTUFFS WANT ADS

Dependable **LABORATORY QUALITY CONTROL**
Feeds, Ingredients, Fat Stability, Feed Additives
and Medications—Protect Your Feed Quality
Pope TESTING LABORATORIES BOX 903 DALLAS, TEXAS

Farm Bureau Supports Regional, State Orders; Opposes National Basis

CHICAGO — The American Farm Bureau Federation, which for many years has favored marketing orders on a state or regional basis "where close control can be maintained by local producers," opposes the adoption of nationwide turkey marketing orders.

This week, Charles B. Shuman, Farm Bureau's president, said, "A single nationwide federal order covering all producers of one commodity cannot work because it could not recognize differences in production and marketing conditions. Marketing orders should not be used as a direct control over production.

". . . Attempts to restrict supplies and force prices higher would place a premium on the development and purchase of substitutes, cause unwarranted shifts in production of turkeys and other crops and encourage producers in other countries to take over our foreign markets.

"In addition, a turkey control program would be a precedent for extending this kind of nationwide order to other commodities and would represent a step toward stricter controls over all farmers."

End your poultry feed formulation problems

WITH T-H PRE-MIX

A customized poultry feed program to fit your particular needs . . . that's feed formulation with new T-H Pre-Mix. T-H Pre-Mix takes the guesswork out of formulation . . . cuts costly over-fortification or duplication of additives. And when used in conjunction with the T-H poultry feeding program, the waste and guesswork are eliminated.

These three carefully prepared pre-mixes are available to suit your poultry feed program:

No. 1 for chick and broiler starter rations

No. 2 for chick grower, poultry laying, breeding and concentrates rations

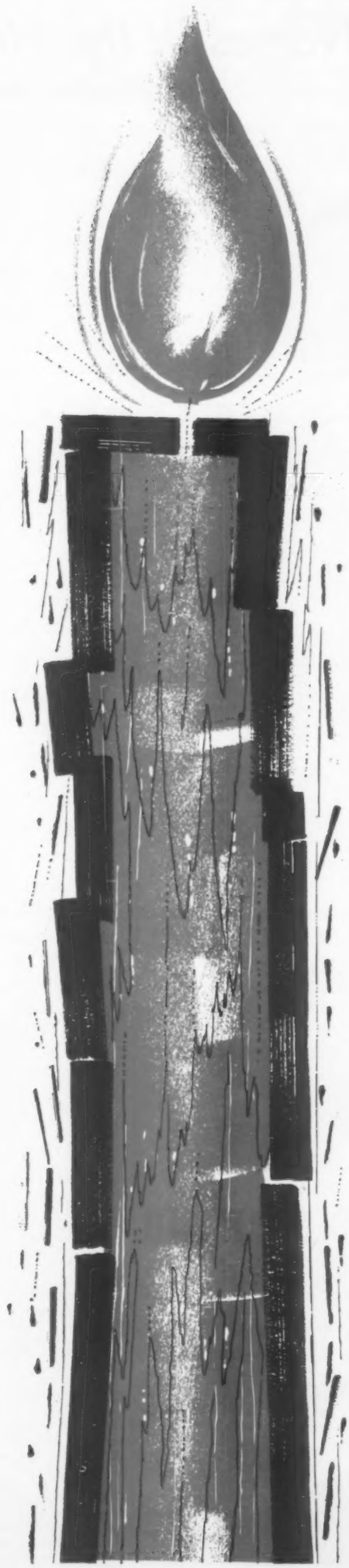
No. 3 for broiler growing rations

There are Thompson-Hayward feed specialists to assist you with your feed problems.

SEAL OF T-H SERVICE

To better satisfy the needs of our customers, the Thompson-Hayward Feed Chemical Division maintains a skilled and highly-qualified staff of feed nutritionists. Constantly in touch with the numerous research programs being conducted by colleges and universities across the nation, this nutritional staff stands ready to supply any necessary information or consultation concerning state feed laws, disease control, specialized feed formulation. It is the sole purpose of this staff to help you manufacture better feeds through more effective use of feed additives. You are invited to take advantage of this service.

THOMPSON-HAYWARD
Chemical Company
P. O. Box 768 • Kansas City 41, Mo.



Merry Christmas

Holiday greetings to all our associates, distributors, dealers and suppliers. May the new year be a happy and prosperous one for each and every one of you. From the makers of Omalass, Scotch O Lass and Dynasol.

VyLactos Laboratories

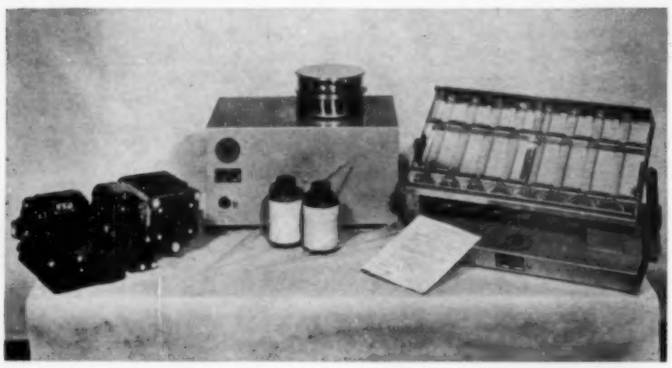
1901 E. Euclid, Des Moines 13, Iowa

MEET Shelley's TWINS

PURE CRUSHED REEF OYSTER SHELL

GOLDEN BALER TWINE
9000 ft to the bale/325 lb tensile strength

BUY A MIXED CAR OF BOTH AT CARLOAD RATES
SHELLBUILDER COMPANY • MARINE BUILDING • HOUSTON, TEXAS



Zeleny Sedimentation Test Kit

Accurate sedimentation tests depend upon the quality of the testing equipment used. The equipment offered by Seedburo Equipment Company is precision made to meet all U.S. Department of Agriculture specifications. Only quality equipment will assure you the best results.

You can get everything you need for sedimentation tests from Seedburo—along with complete instructions—to make reliable tests quickly and easily. Major components are specially constructed of heavy gauge steel and strong aluminum alloys to maintain precision tolerances. Their quality construction gives you built-in reliability and long-life, trouble-free operation.

WRITE TODAY FOR COMPLETE INFORMATION, SPECIFICATIONS AND PRICES

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Names in the News

KENT RYAN NAMED HONEGGERS' DAIRY FEED DEPARTMENT HEAD — The appointment of Kent Ryan as head of Honeggers' dairy feed department has been announced by E. F. Dickey, president of the Fairbury, Ill., manufacturing firm.

Kent Ryan

Mr. Ryan's new responsibilities will include aiding in the development of Honegger dairy feeding programs and supervision of the company's dairy field sales efforts. He will also be responsible for training Honegger sales personnel.

Born and raised on a dairy farm near Tonica, Ill., Mr. Ryan is a graduate of the University of Illinois. Prior positions include service as an official inspector (classifier) for the Holstein-Friesian Association of America for 2½ years, and promotion manager, then assistant manager, in charge of the field staff of Northern Illinois Breeding Cooperative for a six-year period. Mr. Ryan also headed his own purebred dairy cattle sales service.

WEST VIRGINIA PULP AND PAPER APPOINTS SALES REPRESENTATIVE—West Virginia Pulp & Paper Co. has appointed C. Ward Comstock as a sales representative for its multiwall bag division, it has been announced by Kenneth W. Glazebrook, New York district sales manager.

Mr. Comstock will initially service the New York metropolitan area. He is a graduate of New York University, and had 10 years experience in the multiwall industry prior to joining West Virginia Pulp & Paper.

SUDENGA INDUSTRIES APPOINTS FACTORY REPRESENTATIVES — Sudenga Industries, Inc., George, Iowa, manufacturer of bulk feed trucks and custom auger systems for farm automation, has announced several appointments of factory representatives. They include:

Fred Cassens, George, central and northwest Iowa, western Minnesota and eastern South Dakota; Glen Luenenborg, Sioux Falls, S.D., Nebraska; Mid-States Equipment Co., Owen, Wis., Jim Gummerson, northern Wisconsin; Madison Truck & Equipment Co., Madison, Wis., Herman Wille, southern Wisconsin, northern Illinois, north of Highway 64; I&M Bulk Equipment Co., Lowell Welty, Etna Green, Ind., Indiana and Michigan; K&M Sales Co., Keith Tanke and Merle Powers, Moberly, Mo., southern and southeastern Iowa, Missouri and eastern Kansas; Jack Brinkman, Colfax, Ill., Illinois up to Highway 64 in the north part.

HUBBARD FARMS APPOINTS PAUL L. KLINE — Hubbard Farms has announced the appointment of Paul L. Kline as sales and service representative for Hubbard Farms Chicks. Mr. Kline will work out of the Hubbard Grove City, Pa., hatchery.

Paul L. Kline

Prior to joining Hubbard, Mr. Kline worked in sales and service for P. J. Oesterling & Sons. He was previously associated with service firms in Illinois and Ohio. He will cover areas of Ohio and Pennsylvania for Hubbard Farms.

KEENCO NAMES WASHINGTON SALES MANAGER — J. Dean Williamson, London, Ont., Canada, has been named sales manager for the Keen Manufacturing Co., Millville, N.J., for the state of Washington, it has been announced.

Mr. Williamson, who has 15 years experience in the poultry industry, is also Keenco's sales representative for Canada.

He will work closely with Washington Breeders Hatchery, Alderwood Manor, a newly appointed direct factory representative for Keenco automatic poultry equipment.

LEO ESTABROOK APPOINTED BY CENTRAL SOYA—The appointment of Leo H. Estabrook to the product marketing department in the Ft. Wayne, Ind., office of Central Soya's McMillen feed division has been announced.

Mr. Estabrook, who will assist the manager of product marketing, joined Central Soya in January, 1960, and has worked on special assignment with the McMillen feed division. He is a graduate of the University of Maine.

DOW LISTS NEW AGRICULTURAL CHEMICAL SALES ASSIGNMENTS—New assignments in the agricultural chemical sales department of the Dow Chemical Co., Midland, Mich., have been announced by W. W. Allen, sales manager.

Reassigned within the department was G. L. Mitchell, field salesman at the Buffalo office, who assumes duties in the Midland, Mich., headquarters offices. He succeeds the late J. L. Maxwell. John T. Tattershall, field salesman, Cincinnati, has been added to the New York office staff in a similar post.

Thomas S. Foster, previously in Dow's market research group, has been assigned to the Chicago office as a field salesman. John H. Bryce, formerly with the company's Dowell division, has joined the Charlotte, N.C., office staff as a feed industry products sales representative.

New employees who have just completed the Dow sales training program include: John Hagaman, Texas A&M graduate, added to the merchandising section of agricultural

SERVING THE FEED INDUSTRY FOR 25 YEARS
Call

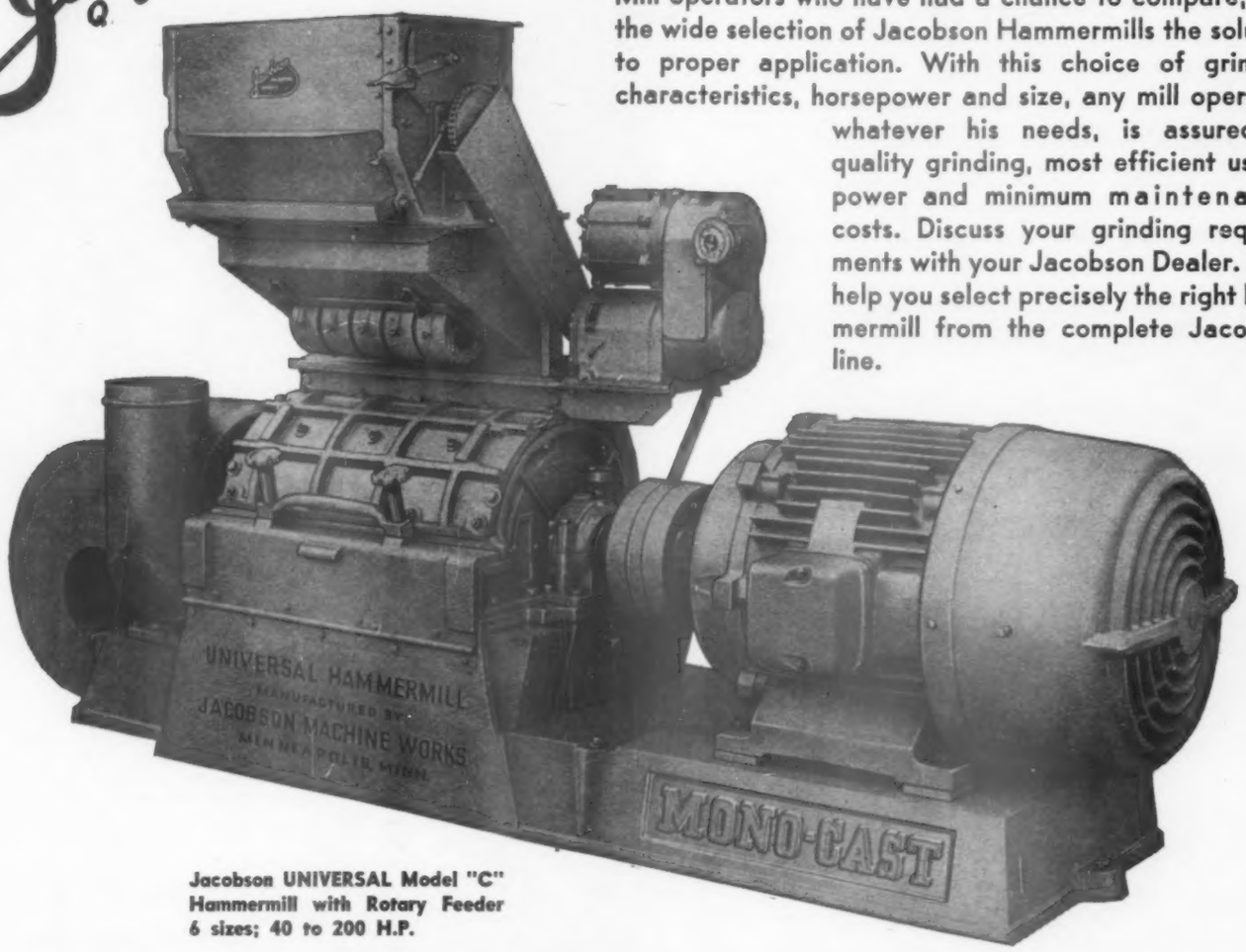
DEDICATED TO SERVICE ON VITAMIN PRODUCTS STABILIZED FOR TOP QUALITY AND PERFORMANCE

RUDY ESCHENHEIMER CO. Box 147 • Mission 6-3441 CHILLICOTHE, MO.

Jacobson QUALITY Hammermills

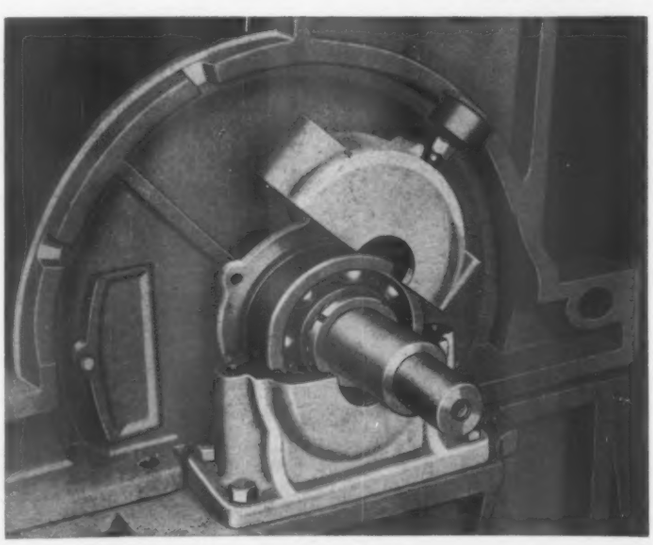
Wide Selection for Proper Application

Mill operators who have had a chance to compare, find the wide selection of Jacobson Hammermills the solution to proper application. With this choice of grinding characteristics, horsepower and size, any mill operator, whatever his needs, is assured of quality grinding, most efficient use of power and minimum maintenance costs. Discuss your grinding requirements with your Jacobson Dealer. He'll help you select precisely the right hammermill from the complete Jacobson line.



Jacobson UNIVERSAL Model "C" Hammermill with Rotary Feeder 6 sizes; 40 to 200 H.P.

. . . . . Another PLUS for Jacobson Users!



JACOBSON THREE-PIECE BEARING HOUSING FOR YEARS OF SERVICE

Indicative of Jacobson's emphasis on long-term satisfaction is the handling of the bearings on the main shaft of a Jacobson hammermill. This is no "off the shelf" bearing. Instead, a single row, deep groove, SKF bearing is mounted in a three-piece housing specially designed for Jacobson hammermills in cooperation with the SKF Bearing Co.

Regular, continued, systematic lubrication is easy because of the conveniently located grease cup. The three-piece housing permits inspection without disturbing the alignment of the bearings and shaft. This is another example of how every detail of every Jacobson hammermill means maximum life hours of operation for top performance.

Write for Bulletins and Name of Representative

Jacobson Machine Works, Inc.

1090 TENTH AVE. S.E. DEPT. M. MINNEAPOLIS 14, MINN.

University of Florida:

Using the Isotope method of determining phosphorus availability—for growing calves straight soft phosphate was found to be 87% and for mature steers 92% as available as good quality defluorinated phosphate.

SOFT PHOSPHATE, INC.
media, pennsylvania

A Natural, Research-Proven, Sensibly Priced Phosphate That Has Fortified More Than 100,000,000 Tons of Feed

★ **Buy and Sell Through WANT ADS** ★

chemical sales in Midland; Kenneth Ablard, University of California, assigned to Dow's new Hawaii office; Charles Furr, University of Minnesota, Charlotte office, and Fred Sullivan, Ohio State, assigned to the Boston office.

DANNEN MILLS NAMES ASSISTANT SUPERINTENDENT—Robert Tatum has been promoted to assistant superintendent of the Dannen Mills feed mill, St. Joseph, Mo., it was announced by Dwight L. Dannen, president. Mr. Tatum has been with the firm since 1948.

JOHN THOMPSON APPOINTED TO MIDWEST BAG POSTS—John Thompson has been appointed plant coordinator of Midwest Bag Co., and manager of Midwest Bag Trucking Corp., according to an announcement by Harry Pomerantz, president of the firm.

Mr. Thompson succeeds the late Pat O'Brien who previously held the positions. Mr. Thompson was Mr. O'Brien's assistant, and has extensive experience in plant operation, material handling and manufacturing and the trucking industry.

A graduate of Drake University school of business administration, Mr. Thompson was with Watson Bros. and General Expressways prior to joining Midwest.

RUMINANTS

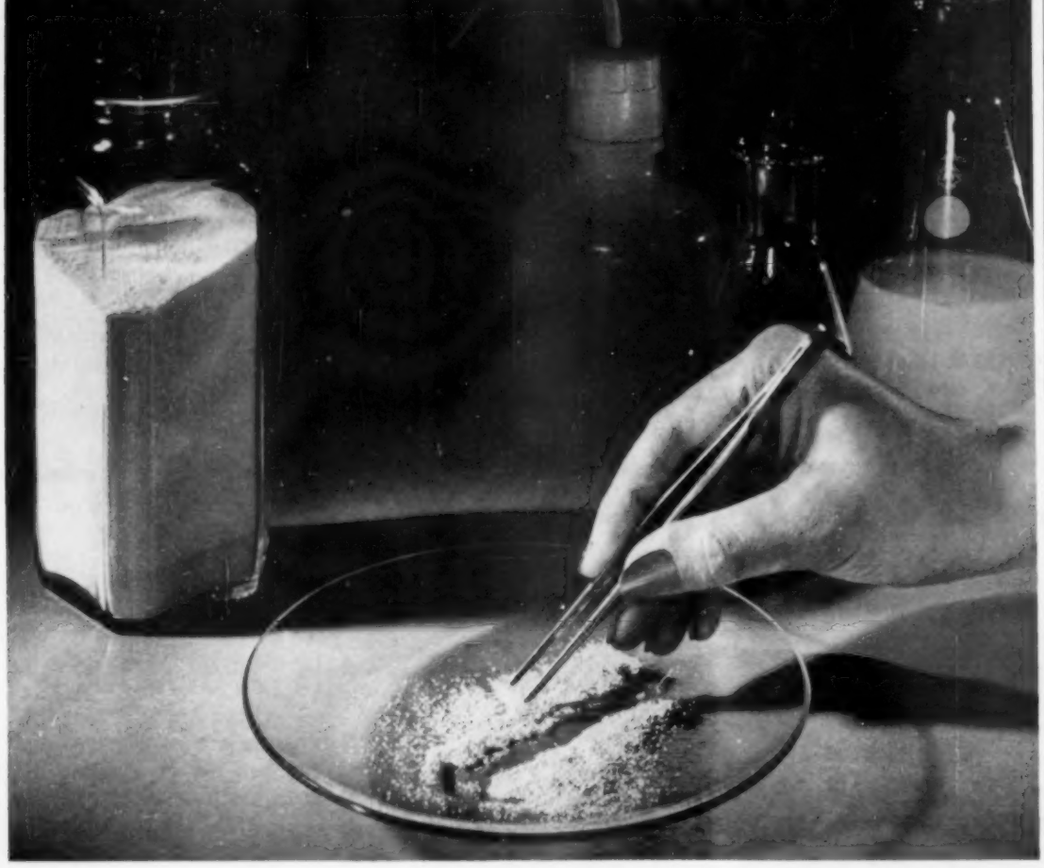
(Continued from page 11)

ratio were 1.86 lb. and 1.84 lb. On the low energy-narrow ratio and the high energy-narrow ratio, significantly increased gains of 2.04 and 2.10 lb. per day were obtained. Response to the narrower ratio of energy to protein was greater during the first 84 days of the trial than during the latter 84 days. Apparently level of protein or ratio of energy to protein was of more importance than level of energy.

Clanton (Nebraska) studied the effect of protein and energy relationships for bred yearling heifers. Rations ranging from 2.3% to 5.6% digestible protein and from 669 to 916 kilocalories of metabolizable energy per lb. were compared. Those containing higher protein and higher energy gained more during the wintering period of the test. However, when all were turned to pasture together, heifers which gained least the previous winter gained most during the summer. The heifers fed the high energy rations grew significantly more during the year than those fed the lower energy rations. The difference in effect of protein levels was not significant. Varying the energy level had a significant effect on body condition whereas varying the protein level did not.

HOW MUCH PROTEIN IS ENOUGH?—Goodrich (South Dakota) attempted to titrate the protein requirements of fattening yearling steers. Protein levels of 9.5, 10.6, 12.0 and 12.7% were compared. Apparently the lowest level fed was not low

MICRO-PRILLED
Feed Urea from Sohio



The free-flowing, non-caking protein source that meets every quality test

Sohio Feed Urea is much more than just an ordinary nitrogen-supplying, 262% protein source. Constant quality control assures the reliability of free-flowing, micro-prilled Sohio Feed Urea. It's non-caking and dust-free . . . sized and shaped to mix and stay mixed in your feeds. Unloads easily, moves along without bridging. Customers who begin using it stay with Sohio Feed Urea because of its high, dependable quality. For top urea value . . . and substantial savings over high-priced protein meals . . . call your "Man from Sohio."

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EXCLUSIVE CRITIC DEALERS Say: "YOU BET WE'RE HAPPY. WE'VE DOUBLED OUR TONNAGE AND HAVE MORE SATISFIED CUSTOMERS SINCE WE WENT EXCLUSIVELY CRITIC."

Dick and Don Basham, Murrayville, Illinois, feed and fertilizer merchants.

Dick Basham looks on as Russ Hazelwood prepares invoice for feeder John Armstrong.

John Armstrong is one of the feeders who became a Basham Brothers customer last year, back when Critic was the No. 3 line there. Satisfied customers like Mr. Armstrong are the reasons why Critic has replaced all other lines in the Basham warehouse.

★★ Dick and Don Basham started in the feed and fertilizer business just six years ago but already are business and agricultural industry leaders in their community. They and their employees have established an enviable reputation for good business practices and sound service. Critic is proud to be a member of their team.

★★ The Bashams, because of the limitations of a mobile milling operation, are using only concentrates and supplements now. However, the Critic-Base Mix Program is receiving careful consideration. They are working on a plan for storage and distribution which will allow them the added flexibility afforded by The Critic-Base Mix Program.

YOU TOO CAN HAVE MORE AND HAPPIER CUSTOMERS . . . AND GREATER PROFITS WITH A CRITIC FRANCHISE

- ★ **Reasonable price and high quality**
- ★ **Competent, dependable assistance for both dealer and feeder**
- ★ **Realistic and workable advertising program**

for the Greatest Grow on earth

CRITIC QUALITY FEED

Checked for Quality Every 15 Minutes

Learn More About Critic's Competitive Advantages for the Local Feed Merchant

You May Call Us Collect (No Obligation, of Course)

THE BEARDSTOWN MILLS COMPANY

BEARDSTOWN ILLINOIS

☆ Classified Ads ☆

Classified advertisements received by Tuesday each week will be inserted for the issue of the following Saturday. Rates: 25¢ per word; minimum charge $3.75. Situations wanted, 20¢ a word; $3.00 minimum. In figuring cost of your classified ad . . . each word, abbreviation, telephone exchange and number, set of initials, or group of figures counts as a word. To the number of words in your want ad itself add six (6) words for your name and address or name and address of your firm. This applies for both direct-reply ads and for blind ads containing a box number. If an ad is keyed, care of Feedstuffs, 25¢ per insertion additional charged for forwarding replies. Commercial advertising not accepted in classified advertising department. Display advertising accepted for insertion at minimum rate of $14.00 per column inch. No discount on ads ordered for more than one insertion. All Want Ads cash with order.

SITUATIONS WANTED

YOUNG NUTRITIONIST AVAILABLE—Graduate veterinarian (foreign), M.S. and Ph.D. from a northwestern university desires permanent position in research, technical service, etc.; feed or pharmaceuticals. Address Ad No. 7528, Feedstuffs, Minneapolis 40, Minn.

HELP WANTED

FIELD REPRESENTATIVE WANTED FOR midwestern territory. Prefer livestock farm background, college and sales experience. Anchor Serum Co., Sales Department, 2400 Frederick, St. Joseph, Mo.

FEED SALESMAN—EXPERIENCED MAN needed for southern Minnesota. Hard work, long hours. Starting salary up to $650 a month. Company car and complete benefits program. Write qualifications to Personnel, Midland Cooperatives, Inc., 739 Johnson Street N.E., Minneapolis 13, Minn.

PLANT SUPERINTENDENT, UNDER 45 years of age to supervise the maintenance and operation of a large feed plant in the Northeast. Must have ability to produce results through people, to plan, control costs and quality. Opportunities for advancement. Address Ad No. 7524, Feedstuffs, Minneapolis 40, Minn.

WANTED — FEED ADDITIVE SALESMAN for northern Indiana, with general chemical background qualifying him to also call on industrial chemical users. Apply by letter only, state age, education, experience, marital status. Indiana residency necessary. McKesson & Robbins, Inc., Chemical Department, Box RH, 3100 South California Ave., Chicago 8, Ill.

WANTED—ASSISTANT PLANT MANAGER, West Coast location. Prefer college graduate or equivalent education in experience. Should have 10 to 15 years' experience in milling, packaging, warehousing of cereal items. This is not a staff position. Man must be able to organize work and people, understand mechanics and have the potential to manage a large plant. Good employee benefits. Salary open. Address Ad No. 7529, Feedstuffs, Minneapolis 40, Minn.

NUTRITIONIST

We have a need for a graduate livestock nutritionist with successful sales background to organize and conduct sales schools for a progressive direct selling organization in Iowa. Earnings commensurate to ability and experience. All replies treated in confidence.

Address Ad No. 7483, Feedstuffs Minneapolis 40, Minn.

REGIONAL MANAGER NEEDED

A progressive direct selling midwestern feed company has regional manager position open for man experienced in animal nutrition, plus successful feed sales background.

This position requires traveling in Iowa, Minnesota and Wisconsin. You will be responsible for maintaining and building a strong sales organization of salesmen and district sales managers. Present sales staff in this area over 500 men. Attractive earnings and benefits. Our employees know of this ad. Send resume to

Ad No. 7486, Feedstuffs Minneapolis 40, Minn.

MACHINERY WANTED

WANTED—ONE USED 1,200 R.P.M., 150 H.P. motor. Wenger Mixer Manufacturing, Sabetha, Kansas.

WHEAT WASHER, CARTER DISC SEPArator, and Arid-Aire dryer. Address Ad No. 7521, Feedstuffs, Minneapolis 40, Minn.

WANTED TO BUY—30 TO 100 H.P. USED California and Sprout-Waldron pellet mills. Address Ad No. 7352, Feedstuffs, Minneapolis 40, Minn.

BAG CLOSING SEWING MACHINES AND equipment. Any type, condition. McCullough & Co., 8205 Paradise Lane, Kansas City 34, Mo.; SOuth 1-2857.

POWER SHOVEL, 5-7½ H.P., TUMBLER type mixer 2 ton, metal screw conveyors 9 in., steel elevators 9x5 or 8x5, 10 ton inside storage bins. Address Ad No. 7523, Feedstuffs, Minneapolis 40, Minn.

WANTED TO BUY — RICHARDSON scales, bag closing machines, other good flour, feed and grain machinery. Complete plants bought and sold. Appraisals. J. E. Hagan Mill Machinery, Box 574, Jefferson City, Mo.

MACHINERY FOR SALE

HAMMERMILL — 6AC PRATERMATIC with 75 H.P. motor, 220-volt starter, crusher and magnet. $1,995, rebuilt ready to go. Jacobson Machine Works, Inc., 1090 Tenth Ave. S.E., Minneapolis 14, Minn.

ONE HEIL SD 8x24 DEHYDRATOR COMplete. One 75 H.P. California Century pellet mill. One Sprout-Waldron Junior 50 H.P. pellet mill complete with boiler, cooler, shaker. Napoleon Alfalfa Mills, Inc., Napoleon, Ohio.

FOR SALE—PORTABLE HAY CHOPPER 224 Fox with 65 gasoline motor on Ford truck, good condition. Excellent use for feed yard purpose, chopping corn and hay. Price $4,000. Write: Cailiari Alfalfa Mill, Route 3, Green Bay, Wis.

FOR SALE—ENCLOSED MOTORS; RICHardson scale; truck scales; hammermills; oat crimpers; horizontal and upright feed mixers; sewing machines; elevator legs; screw conveyors; molasses mixers and pellet mills. J. E. Hagan Mill Machinery, Box 574, Jefferson City, Mo.

WE HAVE ON HAND THE FOLLOWING

DEMONSTRATOR FEED BODIES:

Two 12' self-unloading combination bag-bulk feed bodies complete with 12' wood grain box, 54" sides; one with 12-ton Kraus Hoist, hydraulic drive, each mounted complete, $1,850.00, f.o.b. Manchester.

Two all-bulk 14' Model B-60 Mechanical Drive Demonstrators, complete with lights, mud flaps, etc., each complete, mounted, $2,130.00, f.o.b. Manchester.

Also one 18' combination bag-bulk used body completely reconditioned, only $1,200.00, mounted on your truck at Manchester.

All above on first-come, first-served basis.

Henderson Mfg. Co.

Manchester, Iowa

MACHINERY FOR SALE

1957 DAFFIN MOBILE FEED MILL, USED little, excellent condition. Priced to sell. Garland Bernhardt, Rt. 3, Tomah, Wis.

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enough to define the minimum requirement since daily gains of from 2.42 for the lowest level of protein whereas the highest level supported a growth rate of 2.39 lb. per day. In another segment of the research the feeding of 10 mg. of diethylstilbestrol per head daily resulted in a significant increase in daily gain. Diallylstilbestrol feeding resulted in a small but consistent increase in gain, while dynafac was without effect.

Kolari (Minnesota) fed levels of 1.5, 2.0, 2.5 and 3.0 lb. of linseed oil meal along with a full feed of corn silage and approximately 6 lb. of ground ear corn per head daily to steers in one trial and to heifers in another trial. Steers fed 1.5 lb. of linseed oil meal gained just as rapidly (2.64 lb. per day) as those fed higher levels (2.59 lb. per day for those fed 3.0 lb. linseed meal per day.) However, heifers grew more rapidly on 2.0 lb. of linseed meal per day (2.05 lb. daily) than those fed 1.5 lb. of LOM per day (1.83 lb. per day gain). No benefit was obtained from feeding 10 mg. of lysine per head, daily.

Gossett (Purdue) reported similarly that the addition of 5 or 10 gm. of lysine per head daily to high urea (64% crude protein) was without effect on daily gain. Similarly, the addition of 5 gm. of methionine analog was without effect whereas a level of 10 gm. per day caused a depression in gain. Steers fed 2 lb. of the 32% Purdue Supplement A gained significantly faster than those fed 1 lb. of the 64% supplement.

PHYSICAL FORM OF RATION—Three physical forms of yellow corn —ground, cracked and steam rolled— were compared in fattening beef cattle rations as reported by Hentges (Florida). Another mixture of ground was pelleted. Daily gain on cracked corn for the 112 day trial was 3.0 lb. per day, 0.3 lb. less than the other lots. Feed consumption was lowest, and, thus, the feed conversion was highest for the lot consuming pelleted corn. Higher average grade, more interior fat and deeper fat rind were found in carcasses from steers fed the ground and pelleted rations. Research reported by Rhodes (Iowa) indicated that the physical form of the ration actually affects the proportions of various fatty acids formed in the rumen. A pelleted ration resulted in a narrowed ratio of acetate to propionate, for example. Although a pelleted ration contains virtually the "same" ingredients, we cannot be so sure that the digestive organs consider a pelleted ration to be the "same" as a similar ration in the unpelleted form.

Fontenot (Virginia) tested a whole variety of combinations of grinding and pelleting the various components of lamb rations. The Virginia research showed that (1) pelleting the hay increased feed intake, rate of gain and feed efficiency as compared to ground or long hay; (2) grinding or pelleting hay decreased crude fiber digestibility; (3) pelleting concentrates depressed feed intake, had no effect on rate of gain, and increased feed efficiency, and (4) pelleting the entire ration increased feed intake, rate of gain, feed efficiency and protein digestibility but significantly decreased fiber digestibility when compared to the ground ration.

Preston (Missouri) reported on somewhat similar research in which types of corn were compared—steam flaked, steam cracked, cracked and pelleted. Feedlot performance was superior in those fed steam cracked corn and poorest in those fed pelleted corn. Lambs fed steam cracked or cracked corn carried more outside fat cover.

HEAT-PROCESSED RATIONS—Newland (Michigan) investigated the possibility of any effects from heat treating rations for beef cattle or sheep. In both the lamb and the steer trials, gains were not related to treatment, but feed efficiency was significantly increased by heated (crumbled) corn in the steer trial. In all lamb comparisons, mean feed efficiency values for all the various corn processed groups (pelleted corn, flaked corn, crumbled corn and commercially heat treated corn) were superior to regular corn. Heat processing significantly decreased the acetic-propionic ratio formed in the rumen.

Comparisons of steam rolled and dry rolled barley for fattening steers were reported by Thomas (Montana). No consistent benefit in terms of increased daily gain resulted from steam rolling barley as compared to dry rolling it. In two trials the results were similar, but in a third trial steam rolled barley caused an increased rate of gain.

LEVELS OF ROUGHAGE—One of the interesting areas of research which has attracted a great deal of interest is that of "all-concentrate" rations in which fibrous grains such as barley, oats or ground ear corn furnish all the roughage available to fattening beef animals, Williamson (Purina) discussed research data concerned with pelleted low roughage complete rations for fattening beef steers. He reported the data from nine feeding comparisons in which barley rations in the meal vs. pellet form were studied. Averages of performance on the barley rations weighted by steer days indicates comparative average daily gains of 2.47 lb. and 2.63 lb. for the meal and pellet rations, respectively. Furthermore, feed efficiency figures for the two of 817 lb. and 743 lb. were in favor of the pelleted rations. This is in contrast to much research data which indicates no advantage and possibly a distinct nutritional disadvantage to pelleting high concentrate rations.

The North Carolina workers (Wise) gave research evidence that cattle can be raised quite satisfactorily on rations exceedingly low on fiber, based on commonly accepted standards for levels of fiber. Cattle grew at an acceptable rate of 1.54 lb. per day on a ration of corn, urea, cottonseed oil, minerals and vitamins. The addition of 5% calcium carbonate apparently gave the ration a boost (1.78 lb. gain per day). In another trial, cattle fed corn, soybean meal, animal fat, limestone and vitamins and minerals gained 3.1 lb. per day. Addition of hay to this almost fiber-

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free ration was of no apparent value for 675 lb. steers.

Williamson (Purina) presented data based on the comparative feeding value of several roughage feeds when they were fed at levels of either 8% or 16% of the ration. Very little nutritional difference was shown among cottonseed hulls, rice hulls, ground rice hulls, ground peanut hulls, chopped alfalfa, dried beet pulp, oat mill feed or soybean hulls.

ENZYMES ARE INCONSISTENT—Enzymes have attracted a great deal of research interest over the past three years. However, because of the inconsistency of results obtained from feeding the various enzymes, much of the interest appears to have cooled. Purkhiser (Purdue) used identical twin beef animals in research to determine whether supplemental enzymes had any effect on the digestibility of energy or nutrients. Cellulase significantly improved apparent digestibility of crude fiber but had no effect on digestible energy or on the other nutrients. Protease had no significant effect on the digestibility of energy or any of the nutrients.

Ralston (Oregon) used the nylon bag technique to study the effect of enzymes on digestibility of various components of low quality roughage. A fungal protease was consistent in resulting in higher digestibility in all components. A pectinase and an amylase were without apparent effect.

Although steers fed crude enzyme mixtures of proteolytic, amylolytic and cellulolytic active materials gained 13% more rapidly than their controls fed no enzymes (3.05 lb. vs. 3.48 lb. per day), Clark (Washington) indicated the difference was not statistically significant.

MINERALS FOR RUMINANTS—Iron requirements for lambs on a semi-purified diet were studied by Smith (Purdue). In one experiment, dietary levels of 25, 40 and 70 ppm of iron were compared. Daily gains indicated the level of 40 ppm was more nearly optimum than 25 ppm, although the lambs on 25 ppm grew, but at a slower rate. A level of 10 ppm of iron resulted in weight losses.

Calves were used in an experiment to determine the effect of various ratios of calcium to phosphorus. In this North Carolina research (Wise) nine resulting calcium to phosphorus ratios ranging from 0.4:1 to 14.3:1 were tested. Considering all five replications, performance and nutrient conversion were markedly decreased with Ca:P ratios lower than 1:1. Ratios between 1:1 and 6:1 gave similar and satisfactory results. Ca:P ratios above 6:1 resulted in decreased performance and nutrient conversion values but adverse effects were not as marked as with the rations below 1:1.

MISCELLANEOUS—Gray (Auburn) studied the value of added citric acid or yeast to a pelleted ration containing 30% hay. Statistical analysis showed no significant difference among treatments, but steers receiving citric acid supplement did have an increased average daily gain that approached significance.

What best suits the fancy of a lamb's appetite when creep rations are being formulated? Ross (Missouri) compared various combinations of feeds in a complete pelleted ration against straight shelled corn. One pelleted ration consisted of 60% ground yellow corn, 30% soybean meal and 10% dehydrated alfalfa meal. Another formula was similar except 10% of wheat bran was substituted for the 10% of dehydrated alfalfa meal. Lambs ate slightly more than twice as much of the pelleted ration containing bran as of the ration containing dehydrated alfalfa meal. Lambs on pelleted complete creep rations ate over 178% more feed and gained 12% faster than lambs fed corn in creeps. Lambs on the pelleted rations had more bloom and graded higher at slaughter.

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FIGURE 1. Approximate 1961 Distribution of Broilers-Fryers from Major Broiler Areas to Major Cities

BROILER

(Continued from page 16)

broilers on Delmarva, the feed cost was 10.95¢. There was as much as 3.58¢ difference in feed cost per pound of broiler between growers of the same feed dealer during the same month.

3. The contract arrangement makes considerable difference in cost of production. The cost is not reduced by paying the grower less but by paying on an incentive basis which also makes for better performance and returns the grower more for his house, equipment, and labor than if he is paid a set amount per 1,000 regardless of performance.

4. The kind of fuel used in brooding affects the cost of production and the performance of broilers. Fuel costs can be reduced through winterizing the houses and better management.

5. Progress has been made in reducing the cost of production and in improving the performance of broilers since the 1959 survey in all factors except mortality.

6. Mortality at 3.67% was slightly higher than it was in the survey of 1959. Disease is a big factor affecting cost of production, and every effort must be made to improve sanitation and medication procedures.

7. In comparison with other areas, Delmarva is still at a disadvantage in terms of cost of production by about 2½¢ lb. than the Southeast area. Some of this is offset by lower transportation costs for Delmarva and by better performance. (See Table 4.)

8. There is still a big job for the broiler contractor through his serviceman to upgrade the performance and reduce the cost of production of growers who consistently fail to reach satisfactory standards.

AREA COMPARISONS IN TRANSPORTATION OF BROILER FEED INGREDIENTS AND READY-TO-COOK CHICKEN—Based on a study of transportation rates, Dr. Harold Smith and Dr. John Curtis of the University of Maryland's department of agricultural economics, observe that the cost of transporting feed ingredients into Delmarva continues to place the area in an unfavorable position relative to other broiler areas. However, they note, Delmarva has a location advantage in terms of processed poultry moving to market.

"In 1959, Delmarva was at a disadvantage in cost on feed ingredients of approximately $8 ton compared with major southeast areas," Drs. Smith and Curtis note. "In the meantime, the impact of this disadvantage has been circumvented largely by increases in local corn storage facilities, thereby relying more heavily upon local corn and by increasing purchases from the Carolina and Virginia areas to take advantage of water rates."

Conclusions

The authors conclude from their 1961 study and earlier studies:

1. General increases have occurred on rail shipments to Delmarva from Midwest points since 1959, while major reductions have taken effect in most other areas.

2. Freight reductions proposed by Southern Railway would further cut rates by $7 to $10 per ton on grains moving from midwestern points to territories in the Southeast. ("This proposal, while temporarily suspended, should be given further study and possibly should warrant action by the Delmarva poultry industry.")

3. Major adjustments have been made in Delmarva in terms of feed ingredient sources due to continued high freight rates. In 1959, for example, 56% of the corn required was obtained from the local area. Today, the figure is 80%. Supplies from North Carolina and Virginia, where transportation is possible, have been increased. Movement of corn from the Midwest now accounts for only 5% of local needs compared with 38% previously. The reduction in volume moving by rail amounts to 6.3 million bushels.

4. The poultry industry in Delmarva has taken advantage of the availability of soybean oil meal obtained from Norfolk, Va.; and, furthermore, has reduced its total requirements, thereby curtailing much of the purchases from Midwest territory. The reduction in rail shipment of soybean oil meal alone is estimated at 124,000 tons from 1959 to 1961.

5. By substituting Carolina and Virginia corn for Midwest corn, freight savings have been on the order of $9 ton.

AREA COMPARISONS OF BROILER PROCESSING AND MARKETING—Delmarva processors are credited with contributing greatly to the general health and maintenance of the Delmarva poultry industry by Dr. N. V. Helbacka, Dr. H. D. Smith and J. L. Casterline, Jr., of the University of Maryland in their report covering a July to September, 1961, study of broiler processing and marketing.

They say a look at data collected in their study shows that the higher prices Delmarva processors receive for their poultry are being passed back to growers who have a higher cost of production than in other major broiler areas. "Delmarva processors practice sound merchandising methods and do a considerable volume in store-door delivery," the researchers say.

They also note, however, that "the selling and merchandising of ready-to-cook poultry does not receive as much emphasis as it should. This phase of the industry is grossly neglected. Most of the poultry is sold by telephone, although some processors indicated they were putting more salesmen on the road."

Comparisons

From their 1961 five-area comparisons of procurement, live price, processing procedures, labor and overhead cost and supply factors affecting price, the University of Maryland researchers also concluded:

1. Cost of live broiler procurement is less for Delmarva than for other areas.

2. The live price is highest in Delmarva due to a heavier bird, which brings a higher price in market channels. This higher price is necessary to cover a higher raw product cost.

3. Greater area differences were noted in processing costs than any other factor considered. Delmarva has higher processing costs than other areas due to higher wage rates; slightly lower yields, resulting from the assumption of condemnations, and a lower per cent of grade A birds.

4. Delmarva has greater plant efficiency as measured by a higher output per man hour.

5. Delmarva processing overhead costs are higher.

6. Processors should further concentrate on quality control procedures, grade improvement, procurement procedures and overhead costs.

7. Processors should consider some diversification in the type of product sold and consider all aspects carefully before going into more and larger freezing facilities.

Trends Indicated

In addition to the preceding conclusions, the authors report that the following trends were indicated by data made available on a tour of major broiler areas and by information obtained from the U.S. Department of Agriculture:

1. The volume of broilers federal-state graded has increased in all areas. The per cent graded in Delaware-Maryland was 28.6% in 1961 compared with only 11.2% in 1959.

2. Delaware-Maryland ranked second in volume as a supplier of broilers for school lunch purchases.

3. Delmarva has shown an improvement in dressing percentage since 1959.

4. "Community plant" construction probably was a factor in broiler expansion in the Southeast. (The authors explained that in some localities, small towns have donated sites for "community plants" and extended utilities to the site to attract industry to locate in the area. If the community was unable to attract a company under this provision, frequently a bond issue was made for funds to build a plant which could be leased to industry.)

5. Delmarva broiler markets are concentrated principally in the Northeast. (See Figure 1.) Most of the birds move to New York, Philadelphia, Boston and Pittsburgh. Markets at the disposal of Georgia-produced birds include the New York-Philadelphia area, Florida, Ohio, Michigan, Illinois and many of the larger cities in the South. The Mississippi-Alabama area supplies markets from Los Angeles to New York, depending on where there is a price advantage. Markets advantageous to Arkansas appear to be mainly to the west and north. It was learned that truckers preferred not to go into Chicago or other midwestern points from Arkansas.

6. Freezing is becoming more important in the South.

MARKETING DELMARVA BROILERS—The summary of the final report in the Delmarva broiler industry relates that the nearby northeastern markets of Boston, New York and Philadelphia are the ones in which Delmarva competes most effectively with broilers produced in other areas.

"The immediate northeastern market area . . . creates a market adequate to use all of the broilers produced in the area from Virginia to Maine and allows for substantial receipts from other production areas," W. T. McAllister, University of Delaware extension marketing specialist, observes.

Mail Survey

Among the indications of a mail survey of retail food organizations operating in the Northeast area are these:

—More of the voluntary and cooperative retail groups use Delmarva as the principal source of fresh chickens than the corporate chains.

—Quality, price and reputation of the supplier, in that order, are the factors which influence retailers' choice of a supplier of fresh poultry.

—Survey respondents expressed some interest in selling frozen, tray-packed chicken as fresh chicken in thawed or semi-thawed condition. Many retailers expect a substantial increase in this method of distributing poultry in the future.

—Cutting and packaging at the processor level was predicted by more than half of the retail organizations replying to the questionnaire.

—Most retailers thought "price specials" were an effective means of stimulating demand and therefore had a beneficial effect on farm prices for broilers.

—Most retailers had a gross margin of between 25 and 30% on fresh broilers. During special sales this margin was cut approximately in half.

—Brand identification—processors or private label—was acceptable to two thirds of the corporate chains and most of the voluntary and cooperative retail groups replying to the questionnaire.

—Retailers said they were not getting much merchandising assistance from their poultry suppliers nor from the poultry industry promotional groups. The survey indicated that the poultry industry should review present promotional programs aimed at assisting retailers with sales and merchandising efforts.

TABLE 3. Production Performance by Months—241 Flocks

Months	—Average age— weeks	days	Avg. weight	Feed Conv.	Point spread	% Mortality
December	9	6	3.88	2.45	143	2.98
January	10	1	3.78	2.58	120	5.20
February	9	6	3.90	2.46	144	4.28
March	9	6	3.82	2.46	136	5.74
April	10	0	4.04	2.45	159	3.91
May	9	6	3.89	2.41	148	4.86
June	9	5	3.81	2.41	140	4.32
July	10	2	3.73	2.38	135	4.32
August	10	0	3.65	2.34	131	2.58
Average nine months	10	0	3.83	2.44	139	3.67

TABLE 4. Average Cost of Production—Delmarva Compared With Southeast July, 1961

	Delmarva*	Southeast
Feed	11.02	9.00
Chicks	2.86	2.50
Fuel	.35	**
Litter	.25	**
Health and sanitation	.64	.28
Insurance	.03	.06
Selling	.01	.50
Other costs	.03	
Total (less contract)	15.19	12.34
Pay to grower	1.63	2.00
Total costs	16.82	14.34

*Based on average of 38 flocks sold during July, 1961.

**Paid for by grower out of his payment received from contractor.

CHICAGO

(Continued from page 1)

hearing.

Testimony indicated that some very small and some very large growers lean toward marketing orders. But, in general, the grower who also processes and markets his own birds at a premium price is strongly opposed to marketing orders.

NTF Statement

In a long-awaited statement of position, the National Turkey Federation, through its president, took no definite stand for or against marketing orders but said the majority of the federation's directors favors development of some type of self-help program employing the marketing order technique. A long list of suggested changes in the marketing orders proposed was submitted by NTF.

The Grain & Feed Dealers National Assn. is opposed to marketing orders because they would do more harm than good, according to testimony of its hearing representative.

Other statements by feed industry representatives left the impression that adoption of marketing orders, especially as proposed, would stagnate the turkey industry, remove freedom of choice, prohibit normal growth of efficient producers, prohibit turkey production from shifting naturally to states or areas where production is more feasible and economical and deny farmers not now raising turkeys an opportunity to become turkey growers.

An executive of a Nebraska feed manufacturing concern knocked the "unsound practices" of some large feed manufacturers and charged that these practices have caused the turkey industry's over-production problems.

Farm Bureau Represented

Farm Bureau's president, Charles B. Shuman, said his national organization wanted no part of marketing orders on a nationwide basis, but still maintained a position favoring supply management on an area basis.

Mr. Shuman's appearance at the hearing was particularly interesting because it gave Francis Kelly, National Farmers Union legal counsel, a chance to ask the head of the farm organization which seldom sees things the way NFU does, some needling questions. Mr. Kelly's questions and Mr. Shuman's answers were exchanged pleasantly, however.

As at previous hearings, Mr. Kelly coordinated the appearances of many of the witnesses who testified in favor of marketing orders. And Dr. Bill Jasper of the American Farm Bureau Federation served as counsel for many marketing order opponents, a job he also assumed at previous hearings.

Carl Stout Testifies

In the prepared testimony of Carl Stout of Richland, Mo., president of the National Turkey Federation, it was stated that "although there is division among our board of directors with respect to the orders as proposed, the great majority of our board has consistently favored the development . . . of self-help measures employing the marketing order technique."

His statements were read by NTF's executive secretary, M. C. Small, because an illness had affected Mr. Stout's voice.

Mr. Stout's testimony indicated that NTF has sought self-help federal legislation because "the science of turkey production has advanced to the point where production has been expanding faster than consumption, even though consumption has risen steadily."

In the absence of some method of organized self-discipline, he said, "the industry will continue the trend of over-production with little or no profit to producers, forcing them to become captive producers for feed companies who must compete for feed outlets."

Mr. Stout also said NTF is in accord with the principle of obtaining supply adjustment through quantitative limitations primarily at the hatching egg level and secondarily at the market turkey level. But NTF wants the proposed orders amended so that quantitative limitations would be established on the number of hatching eggs set and needed to produce the estimated number of turkeys which would satisfy the market before the imposition of any quantitative limitations on market turkeys.

NTF believes further study, clarification and amplification of the proposed orders are necessary and recommended that the National Turkey Advisory Committee be recalled "to determine whether agreement can be worked on a specific proposal or whether further legislation is needed to develop an adequate program for the turkey industry."

GFDNA Statement

Appearing for the Grain & Feed Dealers National Assn., Frank T. Heffelfinger, II, vice president of F. H. Peavey & Co., Minneapolis feed and grain firm, said the association stands on the belief that "the policy of the (Agricultural Marketing Agreement) Act has less chance of being effectuated through marketing orders than it has without them. The interests of both the producer and the consumer are best served if the federal government does not interfere with the effort of the industry by imposing monopoly market limitation techniques administered by a central committee, but approved by the government."

Marketing orders, he said, would tend "to plateau all segments of the industry and to lessen the incentive for research and innovation which, history has proven, have brought about the level of efficiency which we enjoy today. . . . If we improve ourselves . . . we do so mainly because we are forced to do so under a highly competitive system that would likely not exist under marketing orders."

Mr. Heffelfinger, who is the GFDNA's feed committee chairman, also observed that "a tendency to seek outside salvation . . . undoubtedly accounts for some of the testimony favoring government intervention through orders to restrict turkey operations to the point where those who remain can make money."

Mr. Heffelfinger said, "No one can deny that prices farmers receive for turkeys must increase," but "any attempt to add up to another 30¢ lb. on turkeys retail to achieve legal parity to growers will tend to make turkey marketings even more seasonal in nature."

Another potential danger of marketing orders noted by the GFDNA representative could be "the emergence of black marketing of poults and market turkeys, or other illegal practices."

Regarding "the public interest," Mr. Heffelfinger said any severe cut in production would run the risk of causing loss of employment in all segments of turkey producing and marketing.

At several points during Mr. Heffelfinger's presentation of his prepared testimony, USDA counsel objected to references to statements made by "agents" of the department. These objections were sustained by the examiner, O. Osmond Hyde. But an objection to quoting a statement made by Secretary of Agriculture Orville Freeman at Atlanta was overruled. Mr. Hyde's rulings and comments indicated that only the secretary of agriculture is responsible for statements made on behalf of his department.

"Unsound Practices"

In the testified opinion of John R. Cooper, executive vice president of the O. A. Cooper Co., Humboldt, Neb., feed manufacturing concern, "Unsound practices on the part of some large feed manufacturers have caused over-production" in the turkey industry.

He said it is known that "the bulk of the feed (fed turkeys) is furnished by only a few concerns due to their integration programs. These are the very programs that have promulgated the current chaotic condition prevalent in the turkey industry.

"Of course the national feed concerns want quotas," he continued. "They will then have a sinecure. The tremendously large commercial turkey producers want the same thing for the same reason.

"We feel it is very unfair if the man who wants to raise 500 or 2,500 birds as a sideline for his efficient family farm operation is prohibited from doing so. We also think it is unfair if the people who backed away from unsound financing arrangements and unsound risks and who did not condone unsound expansion are for eternity banned from being in the turkey feed business."

Mr. Cooper placed his company on record as opposing turkey marketing orders "without specific exemption made for 'family' farm operations." He suggested that "possibly there should be no objections to controls provided they exempt the family farm" and mentioned that somewhere around 5,000 birds should be the number of birds for determining the exemption limit.

He commended the "many stalwart individuals" who have been opposed to "turkeys in common" and could bring about a solution to the turkey industry's problems "if freed of the cross of vertical integration."

Forces at Work

"Economic forces already at work within the feed and turkey industries and restrictions already placed on finance will eliminate in the coming year the over-production that depressed prices so destructively in 1961," testified Vernard E. Lundin, director of public relations, Hubbard Milling Co., a Mankato, Minn., feed manufacturing concern which, he said, has four plants in Minnesota, Iowa, Indiana and Illinois and has served the turkey industry for more than 30 years.

He said Hubbard Milling is opposed to the marketing orders proposed for turkeys and hatching eggs. His list of reasons why, which summarized points of opposition stated by many witnesses, included:

"1. The turkey hatching egg order gives no assurance that the independent turkey grower would be allocated his fair share of poults.

"2. This would tend to encourage further integration in the production of turkeys to the exclusion of the independent grower.

"3. Nothing . . . would prevent the hatchery, and those associated with it, from raising all of the poults hatched under its established quota. The independent producer would not have access to poults on a free market.

"4. Nothing . . . would regulate the price at which the restricted number of poults would be sold.

"5. Interference with the law of supply and demand could result in driving turkey prices upward to the point where consumption would be curtailed and the turkey industry would lose the market it has struggled years to build up.

"6. Democratic processes are nullified by powers given the secretary of agriculture to remove any member of the board or committee or any of its employees or agents, and power of veto over any and all of the committee's decisions or acts. . . .

"7. . . . No provision is made for control over the total pounds of turkey produced.

"8. Administration of the proposed orders and manpower needed for enforcement of regulations adopted would build a tremendously costly governmental bureau that cannot be supported under present provision for its financing."

"Definitely Opposed"

James F. White, Beach Milling Co., Holland, Mich., said the independent turkey growers who buy the company's feed "are definitely against turkey marketing orders in any form whatsoever."

He compared the turkey industry with a growing boy. "It's been getting bigger and growing stronger every year. And, like most boys, as it gains in strength in size the industry has been taking more risks such as a boy climbing too high a tree.

"This year the boy fell out of the tree and sprained his wrist. We'd bandage a real boy's wrist, knowing that it would be some time before the boy climbs too high in a tree again.

"However, there seem to be segments of the turkey industry who want to cure a sprained wrist by cutting off the arm and sending the boy to an institution for the handicapped for the rest of his life."

Mr. White added he believes the growers his company serves "are satisfied with the returns of the turkey industry over the past 10 years and are not ready to throw away their freedom of initiative and be consumed by federal controls.

"In our opinion, the present situation of the turkey industry could be cured very quickly if it was required that all growers had to pay cash for their poults."

For Marketing Orders

One of the more lucid arguments favoring marketing orders came from Parks Dahlgren, owner of Parkhill Turkey Farm at Bird Island, Minn.

"If the turkey industry would have had a marketing agreement this past year this disastrous market price of 1961 would have been avoided," he said. "By merely removing 20% of the hens at this time last year the market price would be several cents over the cost of production now . . ."

It is his opinion that "no other phase of livestock lends itself to supply control like the turkey industry." He said all hens are registered with the state of origin and this makes it possible to accurately forecast 12 months in advance the number of turkeys to be raised.

Mr. Dahlgren contended that it is time the industry stopped "mixing economics with morality." He said it should stop imagining there is a turkey marketing order that will be "painless and perfect." He urged turkey growers to unite in support of a practical supply management program. "Our very existence and survival depend on it," he said.

Grower Seniority

James L. Fox, a Chicago attorney representing himself and 25 other turkey growers with operations in Codington County of South Dakota, said he was for grower allotments and that the "seniority" of growers would be recognized by basing allocations on this formula: Multiply 1959 production by 3, multiply 1960 production by 2, multiply 1961 production by 1 and then divide the total by 6.

A. C. Watson, a grower from Noble County, Ohio, was one of several witnesses who said they liked the allocation formula suggested by Mr. Fox.

Mr. Watson, who raised 6,000 birds this year, said he was speaking for the "little man" in the turkey industry. He said he believed that other small producers, like himself, want marketing orders. "I have faith in the committee and the secretary of agriculture and believe they will come up with something that will help us," he declared. Commenting on the plight of turkey growing in his area of Ohio, Mr. Watson added, "We can't be integrated because we haven't enough net worth to entice you fellows to come down to see us." This is one of many statements made by Mr. Watson which aroused laughter among the hearing's witnesses and spectators.

He was one of several proponent witnesses who attempted to show that most of the turkey growing financing in recent years has come from integrators. He said the Production Credit Assn. in his area financed about 90% of the area's turkeys about 15 years ago, but today

(Turn to CHICAGO, page 97)

The FEED MARKET

PRICE QUOTATIONS, MARKET TRENDS
OF PRINCIPAL INGREDIENTS

NOTE: Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bulk, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

ALFALFA MEAL

Kansas City: Demand fair; trend steady; supply adequate; 17% dehydrated alfalfa, 100,000 A pellets $46@48, reground pellets $47@49; 18% dehydrated alfalfa, 125,000 A pellets $47@51, reground pellets $48@52; 20% dehydrated alfalfa, 150,000 A pellets $52@58, reground pellets $54@59; all unchanged.

Los Angeles: Demand fair; trend steady; supply adequate; dehydrated meal, 17% protein, 100,000 A $51@52; dehydrated pellet meal, 17% protein, 100,000 A $53@54; suncured meal, 15% protein $41@42; suncured crumbles, 15% protein $43@44; all unchanged.

Chicago: Demand less aggressive; supply fair; trend lower by $1; $50.10@51.10.

Cincinnati: Demand fair; trend steady; supply adequate; 17% dehydrated, 100,000 vitamin A $51@54, unchanged.

St. Louis: Demand fair; trend firm; supply ample; dehydrated, 17% protein, 100,000 units of vitamin A pellets $48.50, up 50¢.

Boston: Demand fair; trend easier; supply ample; dehydrated, 17%, pellets $56, sacked, off $1.50; suncured 13% $48, sacked, unchanged.

Ft. Worth: Demand fair for dehydrated, slow for suncured; trend steady; supply sufficient; sacked: dehydrated, 17%, 100,000 A $56@57, rail or truck, unchanged; suncured, 13%, ½-in. grind, No. 1 $43, up $1.

Minneapolis: Demand fair; supplies adequate; price advanced $1; 17% dehydrated, 100,000 units vitamin A reground pellets up to $52; oiled reground up to $53.

Portland: Demand moderate for suncured, improving for other; trend steady for suncured, firm for other; supply adequate; 15% suncured $43, sacked; 20% dehydrated pellet meal $69.50, sacked.

Denver: Demand fair; supply ample; $46, unchanged.

Seattle: Demand fair; trend firm; supply ample; suncured 15% protein $40, Seattle, unchanged; dehydrated, 150,000 A units $67, Seattle, unchanged.

Buffalo: Demand fair; trend steady to lower; supply adequate; $61, sacked, Boston, off 50¢.

Memphis: Demand fair; trend steady; supply ample; dehydrated, 17% protein, guaranteed 100,000 units vitamin A $54.50, unchanged; reground pellets $53.60, unchanged.

ANIMAL FAT (STABILIZED)

Chicago: Demand excellent; ½@¼¢ higher; supply ample; bleachable fancy tallow $5.75 cwt., yellow grease $5.25 cwt., both tank truck or carlot.

Los Angeles: Demand slow; trend steady; supply ample; 5½¢ lb., unchanged.

St. Louis: Demand fair; trend steady; supply ample; yellow grease 4¾¢ lb., delivered, tank trucks or cars, unchanged.

Boston: Demand and trend steady; supply steady; tallow 5¾¢ lb., unchanged to ⅛¢ higher; yellow grease 5⅛@5⅜¢ lb., unchanged.

Ft. Worth: Demand good; trend steady; supply sufficient; prime tallow, tank cars 5¼¢ lb., drums 6⅝@7¼¢ lb., f.o.b. north Texas packing plants with returnable drums, unchanged.

St. Paul: Demand good; supplies ample; domestic and export demand moved the price up ⅛¢ lb. to a level of 5¼¢ lb., f.o.b. producer's plant, for bleachable fancy.

Memphis: Demand fair; trend steady at the advance; supply adequate; yellow grease 5¼¢ lb., prime tallow 5½¢ lb., both up ¼¢.

BARLEY FEED

Baltimore: Demand improved; trend up $2@3; supply moderate; $46.50, sacked.

Chicago: Demand good; trend stronger, up $2@3; supply moderate; $36, sacked.

Los Angeles: Demand slow; trend steady; supply adequate; $2.62½ cwt., unchanged.

Boston: Demand and supply fair; trend steady; $48, sacked, unchanged.

Denver: Demand fair; supply short; $2.25 sacked, $2.30 bulk, unchanged.

Seattle: Demand and supply fair; trend firm; $51.50, truck lots, unchanged.

BLOOD MEAL

Chicago: Demand good; trend strong, up $5; supply light; 80% protein $140, sacked.

Los Angeles: Demand better; trend firmer; supply tighter; $5.25@5.50 a unit of ammonia, sacked, up 25¢.

BONE MEAL (STEAMED)

Boston: Demand and trend steady; supply steady; $105, unchanged.

Cincinnati: Demand fair; trend steady; supply ample; $105, sacked, Cincinnati, unchanged.

Los Angeles: Demand slow; trend steady; supply adequate; imported $78, 20 ton lots, sacked, unchanged.

Chicago: Demand fair; trend firm; supply adequate; $97.50, sacked.

Ft. Worth: Demand improved; supply sufficient; trend steady; domestic $100, sacked, f.o.b. Ft. Worth, unchanged.

Buffalo: Demand and trend steady; supply fair; $105, sacked, f.o.b. Buffalo, unchanged.

Denver: Demand light; supply ample; $110, small lots, unchanged.

Seattle: Demand fair; trend steady; supply good; $92, f.o.b. car Seattle, sacked, unchanged.

BREWERS DRIED GRAINS

Cincinnati: Demand poor; trend higher; supply adequate; $54, up $2.

Chicago: Demand good; trend very firm; supply fair; 26% protein $43@44.

St. Louis: Demand good; trend firm; supply limited; 26% protein $45, unchanged.

Boston: Demand fair; trend firmer; supply adequate; 26% $57.10, up $1.10.

Los Angeles: Demand slow; trend steady; supply limited; $51, unchanged.

Ft. Worth: Demand slow; trend steady; supply sufficient; 28% protein $60.10, sacked, December, up $2.

Buffalo: Demand and supply fair; trend steady; $56, Boston, unchanged.

BREWERS DRIED YEAST

Los Angeles: Demand slow; trend steady; supply adequate; 10¢ lb., 5 ton lots, sacked; 11¢ lb., 1 ton lots, sacked; 13¢ lb., less than ton lots, sacked; all unchanged.

Cincinnati: 9@10¢ lb., sacked, unchanged.

St. Louis: Demand fair; trend firm; supply ample; 9½@10¢ lb., carlots, sacked; 10½¢ lb., ton lots; 11½¢ lb., less than ton lots.

Chicago: Demand fair; trend steady; supply ample; 9½@10¢ lb., carlots, sacked; 9¾@12½¢ lb., l.c.l.

Boston: Demand and trend steady; supply steady; 11¢ lb., unchanged.

Buffalo: Demand good; trend higher; supply limited; $9.70 cwt., f.o.b. Buffalo, up 20¢.

Seattle: Demand slow; trend steady; supply ample; $12 cwt., sacked.

CALCIUM CARBONATE

Cincinnati: Demand fair; trend steady; supply adequate; $7@7.50 cwt., unchanged.

Los Angeles: Demand slow; trend steady; supply adequate; flour $9.85, 20 ton cars, sacked; meal $10.20, 20 ton cars, sacked; both unchanged.

Chicago: Demand fair; trend steady; supply ample; fine grind, plain, 100 lb. bags $9.54; bulk, in hopper cars $7.54; bulk in boxcars $8.05; granular grind $1 premium.

Minneapolis: Fine grind, 50 lb. bags $13.75; 100 lb. bags $13; bulk, boxcar $11.50; bulk, hopper $11; coarse grind $1 premium, delivered Minneapolis.

Ft. Worth: Demand normal; trend steady; supply sufficient; $7.50, sacked, f.o.b. north Texas, unchanged.

Seattle: Demand and trend steady; supply good; $14, ex-warehouse, sacked.

Denver: Demand fair; supply ample; $12.50, carload, unchanged.

COCONUT OIL MEAL

Los Angeles: Demand slow; trend steady; supply adequate; copra cake $65, unchanged.

Portland: Demand active; trend firm; supply adequate; 20% solvent $66.20.

Seattle: Demand fair; trend firm; supply ample; solvent type $73, f.o.b. car Seattle, sacked, unchanged.

CONDENSED FISH SOLUBLES

Los Angeles: Demand slow; trend steady; supply adequate; 3½¢ lb., unchanged.

Boston: Demand good; trend firm; supply fair; $60, unchanged.

Denver: Demand weak; supply ample; 3c lb., f.o.b. West Coast, unchanged.

CORN GLUTEN FEED AND MEAL

(All quotations for all cities are bulk basis, sacked basis $6 more)

Minneapolis: Feed $47.70, meal $74.70.
Atlanta: Feed $51.10, meal $78.10.
Birmingham: Feed $48.90, meal $75.90.
Boston: Feed $52.60, meal $79.60.
Chicago: Feed $41, meal $68.
Cleveland: Feed $49, meal $76.
Denver: Feed $51.30, meal $78.30.
Ft. Worth: Feed $51.80, meal $76.80.
Indianapolis: Feed $46.25, meal $73.25.
Kansas City: Feed $41, meal $68.
Louisville: Feed $47.55, meal $74.55.
New York: Feed $52.20, meal $79.20.
Norfolk: Feed $51.60, meal $78.60.
Philadelphia: Feed $51.80, meal $78.80.
St. Louis: Feed $41, meal $78.

CORN OIL MEAL

Cincinnati: Demand fair; trend higher; supply adequate; $48, up $2.

Seattle: Demand fair; trend easy; supply ample; feed $50.50, car, up 50¢.

COTTONSEED MEAL

Kansas City: Demand fair; trend steady; supply adequate; 41% solvent $70.20, up $2; 41% old process $70.70, up $1.

Los Angeles: Demand slow; trend firmer; supply adequate; $63, up $2.

Cincinnati: Demand fair; trend steady; supply adequate; $69.60, 40 ton lots, up 50¢.

St. Louis: Demand slow; trend firm; supply limited; 41% solvent process $63.50, Memphis; $69.75, delivered, $2 higher.

Ft. Worth: Demand excellent; trend higher; light offerings; 41% old process $68, f.o.b. mills Ft. Worth, up $2@3; solvent 2% fat added $65, nominal, December-January; $65.50 February-April, up $1; loose hulls $13@15, unchanged.

Portland: Demand improving; trend firm; supply adequate; 41% solvent $73.20.

Denver: Demand slow; supply short; $68.50, down $1.50.

Seattle: Demand good; trend firm; supply limited; 41% expeller $73, f.o.b. car Seattle, unchanged.

Buffalo: Demand fair to poor; trend higher; supply fair; $84.40, sacked, Boston, up 50¢.

Memphis: Demand fair; trend steady; supply ample; prime 41% protein, old process $63; new process, 41% protein $62; both up $2.

CURACAO PHOSPHATE

New York: Minimum 14% phosphorus $43.50 sacked, $40.50 bulk, f.o.b. New Orleans, Jacksonville and Philadelphia.

DEFLUORINATED PHOSPHATE

Coronet, Fla.: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%; guaranteed uniform analysis; carload $61.25, sacked, 100 lb. multiwall bags, bulk $58.25; truck load $62, sacked, in 100 lb. multiwall bags, bulk $59, f.o.b. Coronet, Fla.

Tupelo, Miss.: Minimum phosphorus 14%, minimum calcium 28%, maximum fluorine .14% $52, f.o.b. Tupelo in 100 lb. multiwall bags, $49 bulk.

Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 33%, maximum 36%, maximum fluorine .18% $66 (or $3.67 per unit of P), f.o.b. Wales in 100 lb. multiwall bags, $3 less in bulk.

Butte, Mont.: Minimum phosphorus 18%, minimum calcium 32%, maximum calcium 36%, minimum fluorine .18% $81 (or $4.50 per unit of P), f.o.b. Butte, 100 lb. multiwall bags; bulk $78; truck lots of less than 10 tons $10 more, bagged or bulk.

Houston: Minimum phosphorus 19%, minimum calcium 32%, maximum calcium 35%, maximum fluorine .19% $69.35 net ton, f.o.b. Houston, 100 lb. multiwall bags; $66.35 bulk ($3.65 per unit of P).

Port Arthur, Texas: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%, guaranteed uniform analysis, carload and truck load $65.75, sacked 100 lb. multiwall bags; bulk $62.75, f.o.b. Port Arthur.

Muscatine, Iowa: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%, guaranteed uniform analysis, carload and truck load, $71.25, sacked, 100 lb. multiwall bags; bulk $68.25, f.o.b. Muscatine.

Cincinnati: 18% phosphorus, carlots $74.30, ton lots $84.30; 14% phosphorus, carlots $62.50, ton lots $72.50, Cincinnati, unchanged.

Ft. Worth: Demand good; trend steady; supply adequate; minimum 18% phosphorus, maximum 34% calcium, maximum .18% fluorine $73.45, sacked, unchanged.

DICALCIUM PHOSPHATE

Chicago: Bulk, carlots and truck loads, 18½% phosphate $78 and 21% phosphate $89; packed in 100 lb. papers, 10 tons or more, 18½% phosphate $91 and 21% $102; above prices per ton, f.o.b. Chicago Heights, Ill., or Nashville, Tenn.

Bonnie, Fla.: Minimum phosphorus 18½%, granular, $81 (or $4.38 unit of P), freight equalized from nearest producing point, carload basis; bulk carloads $3 less; in truck loads of less than 10 tons, $10 more. Western slope prices, for delivery at established railroad stations and by truck at regular feed mixing plants: California, Arizona, Nevada and Utah, $99.90; Washington, Oregon, Montana and Idaho, $107.15; bulk carloads $3 less; truck loads less than 10 tons, $10 more.

Columbia, Tenn.: Minimum phosphorus 18.5%, minimum calcium 24% $81, f.o.b. Columbia, in 100 lb. multiwall bags; freight equalized with nearest producing point, carload basis; bulk $3 ton less.

Texas City, Texas: Minimum phosphorus 18.5%, minimum calcium 20%, maximum calcium 23%, maximum fluorine .12%; carload and truck load $75.50 sacked, in 100 lb. multiwall bags, bulk $72.50, f.o.b. Texas City.

Trenton, Mich.: 18½% phosphorus and 23% calcium, bulk boxcar/hopper car $78; bagged $81; 21% phosphorus product production discontinued.

Los Angeles: Demand fair; trend steady; supply adequate; 18½% phosphorus $95.10, sacked, unchanged.

Cincinnati: 18½% phosphorus $88.80 bagged in carloads, $98.70 bagged in ton lots, f.o.b. Cincinnati; $81, f.o.b. production points; unchanged.

Ft. Worth: Demand fair; trend steady; supply adequate; $81.50, sacked, unchanged.

Seattle: Demand good; trend steady; supply limited; $91, ex-dock Seattle, sacked, unchanged.

Denver: Demand good; supply limited; $91.50, Denver, 20 ton car; $89.90, Denver, 30 ton car; both unchanged.

Buffalo: Demand and supply good; trend steady; $82.90, sacked, Boston, unchanged.

DISTILLERS DRIED GRAINS

Cincinnati: Demand fair; trend steady; supply fair; $48@52, unchanged.

Boston: Demand good; trend strong; supply light; $61@62, up $1@2.

Buffalo: Demand good; trend steady; supply fair; $61, Boston, unchanged.

DRIED BEET PULP

Boston: Demand and trend steady; supply steady; $53, sacked, unchanged.

Los Angeles: Demand steady; trend firm; supply tighter; $48.50@48.70 at milk shed, unchanged.

Ft. Worth: Demand slow; trend steady; supply sufficient; plain $55, sacked, December, unchanged.

Portland: Demand good; trend steady; supply adequate; $45.50, sacked.

Seattle: Demand fair; trend steady; supply ample; $48, delivered carlots, sacked, unchanged.

Denver: Demand fair; supply ample; $60, unchanged.

Buffalo: Demand and supply fair; trend steady; $52.50, sacked, Boston, unchanged.

DRIED BUTTERMILK

Los Angeles: Demand slow; trend firmer; supply tighter; 15¢ lb., sacked, up ⅝@1¢.

Chicago: Demand fair; trend steady; supply adequate; medium acid $10.25@10.50 cwt., sweet cream $10.25@10.50 cwt., both sacked.

Boston: Demand and supply light; trend steady; 14¢ lb., unchanged.

Buffalo: Demand fair; trend steady; supply adequate; $10.75 cwt., f.o.b. Buffalo, unchanged.

DRIED CITRUS PULP

Los Angeles: Demand steady; trend firm; supply limited; orange pulp $43, lemon pulp $40@41, both unchanged.

Boston: Demand slow; trend easier; supply ample; $48.50, sacked, off $1.50.

Buffalo: Demand fair to poor; trend steady to lower; supply adequate; $31.50, sacked, f.o.b. Florida, off $1.

DRIED SKIM MILK

Boston: Demand good; trend steady to firm; supply fair; 13½¢ lb., unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; 12@13¢ lb., sacked, unchanged.

Chicago: Demand good; trend steady; supply adequate; $13@13.50 cwt., sacked.

Los Angeles: Demand slow; trend steady; supply adequate; 14¢ lb., less than ton lots, sacked; 13¾¢ lb., ton lots, sacked, both unchanged.

Ft. Worth: Demand slow; trend steady; supply sufficient; $16.75 cwt., sacked, unchanged.

Minneapolis: Demand good; supplies still tight; price unchanged; $14.25 cwt.

Buffalo: Demand fair; trend higher; supply light; spray $12.25 cwt., f.o.b. Buffalo, up 5¢.

DRIED WHEY

Boston: Demand and trend steady; supply steady; $4.85 cwt., unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; $5.75 cwt., sacked, unchanged.

Chicago: Demand quiet; trend firm; supply ample; $4.75 cwt., sacked.

Los Angeles: Demand slow; trend steady; supply adequate; $5.10 cwt., carloads; $5.25 cwt., l.c.l.; both sacked and unchanged.

Kansas City: Demand good; trend steady; supply adequate; $5 cwt., sacked, unchanged.

Ft. Worth: Demand fair; trend steady; supply adequate; standard $4.75, sacked, truck or rail, delivered Ft. Worth, unchanged; small lots $5.50, f.o.b. warehouse Ft. Worth, unchanged.

Minneapolis: Demand good; supplies tight; price advanced 25¢ cwt. to $5 cwt., f.o.b. shipping point.

Seattle: Demand steady; trend easy; supply good; $5.70 cwt., ex-warehouse, l.c.l., unchanged.

Denver: Demand slow; supply ample; $5.60 cwt., carload, unchanged.

FEATHER MEAL (HYDROLYZED)

Los Angeles: Demand slow; trend steady; supply ample; $1 a unit of protein, sacked, unchanged.

Boston: Demand and supply in balance; trend firm; $95, unchanged.

St. Worth: Demand good; trend firm; supply limited; 85% protein $85@87.50, sacked, delivered Ft. Worth, unchanged to $2.50 up.

Memphis: Demand fair; trend steady at the advance; supply inadequate; 85% meal $95, nominal, up $10.

FISH MEAL

Boston: Demand active; supply spotty; trend firm; Peruvian 66% $118, sacked, January shipment, carlots; $120 truck lots; both unchanged.

Chicago: Demand good; supplies very tight; menhaden, East Coast $117@120, Gulf $117@118; scrap, East Coast $113@116, Gulf $113@114; Canadian herring $1.65@1.75 a unit of protein.

Los Angeles: Demand and trend steady; supply adequate; local production, 60% protein $1.80@1.82½ a unit, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; $113.10, unchanged.

Ft. Worth: Demand good; trend steady; offerings light for immediate; sacked: 65% protein Peruvian $118@119, unchanged.

Minneapolis: Demand good; supplies fair; prices unchanged; Canadian herring $1.80 a unit for immediate, $1.75 for last half December or January, f.o.b. West Coast; 60% West Coast blended $138.

Buffalo: Demand quiet; trend steady; few late catches from North Carolina offered; 60% protein menhaden $133, f.o.b. Buffalo, unchanged.

Portland: Demand moderate; supply adequate; trend steady; $1.88 a protein unit, sacked.

Seattle: Demand and supply fair; trend easy; Canadian production $1.85 a unit protein, f.o.b. truck Vancouver, B.C., unchanged.

Denver: Demand fair; supply short; $1.80 a protein unit, f.o.b. West Coast, up 5¢.

HOMINY FEED

Los Angeles: Demand good; trend steady; supply limited; hominy meal $52, hominy pellets $54, both unchanged.

St. Louis: Demand good; trend firm; supply adequate; yellow $43.50, up $1.50.

Chicago: Demand easier; supply ample; trend $2@2.50 lower; $43.50.

Kansas City: Demand slow; trend steady; supply adequate; yellow hominy $38.50@39, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; $47.60, down 40¢.

Boston: Demand slow; trend steadier; supply adequate; $56, unchanged.

Buffalo: Demand and supply fair; trend lower; $54.50, Boston, off $1.

Memphis: Demand poor; trend steady; supply ample; white $45.30, yellow $45.30, both down 50¢.

(Turn to QUOTES, page 96)

Major Markets Roundup

Linseed Meal, Animal Proteins Advance

Linseed meal and animal proteins were among the strong gainers for the week's ingredient trading. Linseed meal advanced as much as $4 in the Chicago market, and for the first time in a long while solvent and expeller meals were moving at the same price in some markets. Supplies of the meal were short, but processors had their oil tanks filled.

Meal and bone meal and tankage shot up as much as $9 in Cincinnati.

The index for all feedstuffs, as computed by the U.S. Department of Agriculture, moved up 2.1 points, from 82.7 to 84.8. These figures for the week ending Dec. 12, show all ingredient categories except molasses to be up (see table).

Soybean meal staged advances of up to $4 early in the trading week, but losses of up to $1.50 as compared with last week were marked up by the end of the week.

Milfeeds, which had been moving up steadily, turned mixed this week.

Corn gluten feed and meal each advanced $2.

Feeds: Average Bulk Prices and Index of Weighted Prices*

(Dollars per ton)

	Dec. 12, 1961	Dec. 5, 1961	Change from previous week
OILSEED MEALS			
Prices at prin. mkts.:			
Soybean meal	70.75	68.20	+2.55
Cottonseed meal	67.50	65.90	+1.60
Linseed meal	69.70	67.70	+2.00
Copra cake or meal	59.50	59.50	..
Peanut meal	64.00	64.00	...
Index	90.6	87.8	+2.8
ANIMAL PROTEIN FEEDS			
Prices at prin. mkts.:			
Meat meal	79.85	77.30	+2.55
Tankage	88.40	86.00	+2.40
Fish meal	115.35	113.90	+1.45
Index	77.2	75.2	+2.0
GRAIN HIGH-PROTEIN FEEDS			
Prices at prin. mkts.:			
Gluten feed & meal	50.45	48.45	+2.00
Dist. dried grains	55.80	53.80	+2.00
Brewers dried grains	49.00	47.85	+1.15
Index	79.5	76.6	+2.9
WHEAT MILLFEEDS			
Prices at prin. mkts.:			
Bran	45.50	44.80	+ .70
Midds. and shorts	46.10	45.35	+ .75
Index	82.8	81.4	+1.4
OTHER MILLFEEDS			
Prices at prin. mkts.:			
Hominy feed	48.10	47.70	+ .40
Rice bran	33.50	33.00	+ .50
Index	73.5	72.8	+ .7
ALFALFA MEAL			
Prices at prin. mkts.	50.10	49.55	+ .55
Index	96.4	95.4	+1.0
MOLASSES, FEEDING			
Prices at prin. mkts.	25.59	25.65	— .06
Index	76.2	76.3	— .1
ALL FEEDSTUFFS			
Index	84.8	82.7	+2.1
FEED GRAINS			
Prices at prin. mkts.:			
Corn	38.80	38.10	+ .70
Oats	46.40	46.00	+ .40
Barley	48.50	48.30	+ .20
Grain sorghums	38.40	38.40	...
Index	64.4	63.3	+1.1

*Base period of index is 1947-49.
Source: USDA.

East

BOSTON: The local millfeed market managed to retain most of the preceding week's gains despite a definite falling off in buying interest.

Alfalfa meal and citrus pulp were $1.50 lower, but brewers grains, distillers grains, linseed oil meal and soybean meal registered minor advances.

Bran was slightly easier, but middlings remained steady holding unchanged for the week. Meat and bone meal experienced the sharpest rise of the week, advancing $7.50 a ton. Most of the trading activity of the week was confined to small lots for immediate or nearby requirements. Forward commitments were a rarity.

BUFFALO: Ingredients turned lower in a pre-holiday lull.

Millfeeds declined under a combination of factors. Mixers' business was good, but their weekly replacements have been curtailed for the past several weeks. Millfeeds also met competition from other ingredients, and inventory tax problems crop up at this time of year. Bran was off $1.50; middlings eased 50¢, and red dog was unchanged.

Grains, meat scraps, some vegetable proteins and screenings moved up, while many other items gave ground. Corn advanced 2¢, oats rose 1 to 1½¢, feed wheat was down 1¢ and barley was steady but scarce.

Soybean oil meal racked up a $5 gain but lost it and ended unchanged. Linseed oil meal worked $2.50 higher. Gluten meal and gluten feed gained $2. Meat scraps were very scarce and up $2.50. Fish meal was quiet and steady as some late North Carolina catches were offered.

Midwest

CINCINNATI: Supplies were adequate to meet the quiet demand for ingredients this week.

Meat scraps and tankage jumped $9. Soybean oil meal advanced $4, and corn oil meal and brewers dried grains were up $2. Also advancing were: Linseed oil meal, 50¢ for the old process and $2 for the new; millfeeds and unground grain screenings, $1, and molasses, ½¢.

ST. LOUIS: Feed ingredient prices were generally firm to higher in fairly active trading.

Bulk millfeeds were the major exception to the upward trend, with prices down $1 at the close. Mill offerings were light but buyers were not aggressive due to the increased supplies of dry corn on the market.

Soybean meal moved higher early in the week on reports of heavy export sales. However, as offerings did not tighten up greatly and the meal future at Chicago turned downward, cash meal followed with the result that the upturn was reduced to 50¢ a ton.

After three weeks of steady prices, meat scraps gained $5. Demand was good and suppliers maintained a tight offering policy. Blackstrap molasses advanced ½¢ from the low point of the season. Demand showed little change.

Dehydrated alfalfa pellets commanded slightly higher prices.

MINNEAPOLIS-ST. PAUL: Linseed meal made a sharp advance in this week's ingredient trading which saw prices generally move higher despite slow demand.

The 34% solvent linseed meal advanced $2.50 to $3 and the 32% expeller advanced $1.50 to $2 so that both stood at $64.50 for the first time in many-a-month.

Soybean meal was one of the few losers, being off $1 to $1.50.

Meat and bone meal and tankage came out of the doldrums and sold for $2 to $3 more at the end of the trading period. In the millfeeds, sacked bran was up $1, and, in oat products, prices were steady to $2 higher.

Animal fat advanced ⅛¢ lb. under a combined demand from domestic and export buyers. Dried whey was us 25¢ cwt. under tight supply.

South

MEMPHIS: The demand was generally fair for ingredients on the Memphis market, while mixed feed business was reported as being good.

Based principally on the advance in vegetable proteins and export demand, animal proteins advanced considerably. Now they have reached a point where they appear fairly steady.

Aggressive buying brought about a firm price trend in cottonseed oil meal.

Soybean oil meal, after moving into a higher price range the past few weeks, experienced a dip. December shipment, which had been considered in a tight position a week ago, was being offered freely.

Oilseed meal futures worked in an irregular pattern on the Memphis Board of Trade.

Unrestricted soybean oil meal closed Dec. 12 75¢ lower to 50¢ per ton higher than Dec. 5, while bulk solvent cottonseed oil meal was 50¢ lower to $3 higher. July proved the only loser in cottonseed oil meal, which reflected strength in the cash market.

Southwest

KANSAS CITY: Prices of major ingredients this week were mixed

IMPORTED FISH MEAL
MINIMUM 65% & 60% PROTEIN
FULL MEAL (FISH MEAL WITH SOLUBLES)
DRIED FISH SOLUBLES
100% PURE
(Made from South African Pilchard)
FEED INGREDIENTS
ALBUMINA SUPPLY CO., Inc.
Phone HAnover 2-4174
82 Beaver Street New York 5, New York
Teletype NY 1-3788
Albumina Peruana S.A. Lima
Albumina Chilena Ltda. Santiago de Chile

CHECKERBOARD ELEVATOR
4,800,000 BUSHELS

CHECKERBOARD – The Mark of Top Quality – Top Service
MILO–CORN
ALL FEED GRAINS
CHECKERBOARD GRAIN CO.
BOARD OF TRADE BLDG. • KANSAS CITY, MO. • PHONE HA 1-1114
ST. LOUIS • CHICAGO • MINNEAPOLIS

with changes mostly of a minor nature.

Protein meals recorded some advances wtih cottonseed meal up about $2, due mostly to area mill demand. Linseed meal jumped up $4 to $5 with the strength more from the supply side than a much stronger consumer demand. Soybean meal prices held their own for the week on a slow demand.

Millfeeds moved lower this week with bulk midds. losing about $2, reflecting the slower mixer demand. Sacked milfeeds were only 50¢ lower with dealer trade and mill demand tending to keep supplies cleaned up.

Animal proteins were up about $2.50, and spot supplies are still tight.

Alfalfa meal prices held to those which have prevailed for the past several weeks. However, there were some sales of dehy pellets which reflected slightly lower prices.

FT. WORTH: Millfeed offerings continued tight and while buyers were reluctant to make purchases on the higher market, prices remained firm and shorts advanced another 50¢.

Demand was excellent for the sparse offerings of cottonseed meal and the market was up $2 to $3. Also advancing were: Meat and bone meal, $2.50; brewers dried grains, $2; linseed meal, $2; standard rice bran, $1, and feather meal, $2.50.

West

SEATTLE: Soybean meal remained strong, gaining $1 a ton. However, there appears to be some buyer resistance at this level. Copra meal jumped $2 per ton with limited offerings due to strong demand in California.

Meat meal was weak and down 10¢ per unit with supply exceeding demand. Herring meal was unchanged but could drop after the first of the year depending on fishing.

Corn recovered slightly gaining about 50¢ at the close.

Millfeed remained firm, rising 50¢. There appeared to be ample supply to take care of the demand.

PORTLAND: Feed ingredient trading at Portland and other Pacific Northwest markets was moderately active this week and prices for a number of important items advanced to higher levels. Colder weather was credited with bringing about an improved demand as the week closed. There was also a strong indication that mixers and feeders were anticipating most of their feeding needs through the holidays.

Soybean meal values gained another $1 to $1.50 a ton, with copra meal advancing $2 a ton and cottonseed meal gaining $1. Soybean meal lost some of the early advance at the close due to buyer resistance to recent sharp advances.

Wheat millfeed listings worked $1 a ton higher when offerings tightened in front of recent heavy domestic usage and rather substantial export orders through April. Dehydrated alfalfa meal prices pushed $1 a ton higher in front of a dependable demand.

Other Reports

ALFALFA MEAL: U.S. Department of Agriculture figures just announced show that as of Oct. 31 production of dehydrated alfalfa for six months totaled 1,206,800 tons, an all-time record. The American Dehydrators Assn. says that this figure indicates an annual production of about 1,280,000 to 1,285,000 tons.

The figures show a stock of 586,000 tons, down 20,900 from a month earlier but up 32,800 tons from a year before.

ADA said its calculations on disappearance stand at 701,800 tons as of Oct. 31, again a record. The association pointed out that at the same time last year the industry had disposed of 671,800 tons.

ADA commented that the figures show stocks up 5.9% from 1960, production up 4.0% and disappearance up 4.5%.

Dehydrated alfalfa meal production for the month of October stood at 86,400 tons as compared with 95,200 a year earlier.

FISH MEAL: Based on domestic production and imports, the U.S. supply of fish meal during the first nine months of this year amounted to 408,000 tons—77,000 tons above the nine-month period in 1960, according to a report from the U.S. Department of the Interior. Domestic production was 15,000 tons greater and imports 62,000 tons greater than for the nine-month period of 1960.

The department said that all factors indicate that the total U.S. supply of fish meal in 1961 will exceed the peak year of 1959 when the quantity amounted to nearly 440,000 tons.

September domestic production of fish meal and scrap was nearly 29,000 tons, off 26% from September, 1960, according to the Department of the Interior.

MOLASSES: Corn molasses (hydrol) shipments in October amounted to 1.9 million gallons compared to 1.6 million in September and 2.1 million in October last year. Since Jan. 1, shipments of corn molasses through Oct. 31 totaled 19.1 million gallons as against 19.2 million gallons during the same period in 1960, according to figures of the U.S. Department of Agriculture.

MOLASSES: Imports of industrial and feed molasses during September totaled 19.1 million gallons, according to the U.S. Department of Agriculture. This was about 37% less than was imported in August and 48% less than in September, 1960.

Cumulative imports in the first nine months of the year totaled 215.7 million gallons compared to 375.9 million during the same months last year.

Principal sources of imports during August in millions of gallons were: Mexico, 3.1; Dominican Republic, 4.3; Jamaica, 2.5; Philippine Republic, 1.2; France, 5.2, and Haiti, 1.8. Main points of entry of the imported molasses in millions of gallons were: New York, 11.3; Galveston, 2.6; San Francisco, 1.8, and ports in Ohio, 2.1.

Puerto Rican shipments of blackstrap molasses to the U.S. mainland totaled 2,916,707 gallons in July compared to 3,662,713 in June and 5,272,072 in July last year. This brings Puerto Rican shipments in the first seven months of 1961 to 25,647,308 gallons as against 16,836,348 in the same months a year ago.

Exports of industrial and feed molasses from the U.S. and its territories in September totaled 2.5 million gallons. Practically all of it was shipped to Canada, USDA said. This brings total exports in the first nine months of 1961 to 9.7 million gallons as against 14.6 million in the same months a year earlier.

QUOTES

(Continued from page 94)

LINSEED OIL MEAL

Minneapolis: Demand good; supplies poor due to mill slowdown caused by large supply of linseed oil in tanks; 34% solvent up $2.50@3 to $64.50@65; 32% expeller up $1.50@2 to $64.50@65.

Chicago: Demand excellent; supply light; trend very strong and up $1@4; for the first time in a long while solvent and expeller are at the same price, $64, Minneapolis basis.

Los Angeles: Demand slow; trend steady; supply adequate; local production, 31% protein $71, unchanged.

Boston: Demand good; trend firmer; supply light; 32% $82.20, up $2.

Cincinnati: Demand poor; trend steady; supply adequate; new process $62.50, up $2; old process $64, up 50¢, Minneapolis.

Ft. Worth: Demand slow; trend steady; offerings light; 34% protein, extracted $74.40, December, up $2.

Seattle: Demand fair; trend steady; supply ample; 31% protein, California production $90, delivered, carloads, sacked, unchanged.

Portland: 34% solvent, no quotes available this week.

Denver: Demand fair; supply ample; $78, up $4.

Buffalo: Demand fair; trend higher; supply poor; $62.50, Minneapolis, up $2.50.

MEAT AND BONE MEAL

Los Angeles: Demand slow; trend barely steady; supply moderate; 50% protein $1.70 a unit, unchanged.

Kansas City: Demand good; trend stronger; supply adequate; 50% meat scraps $80 @$2.50, up $2.50.

St. Paul: Demand fair; supplies ample; price up $2@3; $86@89.

Cincinnati: Demand excellent; supply fair; trend strong; 50% meat and bone scraps $82.50, Cincinnati, up $9.

St. Louis: Demand good; trend firm; supply adequate; $82.50, up $5.

Chicago: Demand good; trend $2.50 higher; supply moderate; 50% protein $87.50, sacked.

Boston: Demand active; trend strong; supply fair; $1.30 a protein unit, up 15¢; converted 50% $87, up $7.50.

Ft. Worth: Demand good; trend firm; supply sufficient; meat and bone $77.50 bulk, $80 sacked, f.o.b. Ft. Worth, up $2.50.

Buffalo: Demand fair; trend firm; supply very scarce; 50% meat scraps $85, f.o.b. Buffalo, up $2.50.

Portland: Demand moderate; supply adequate; trend steady; 50% $77.50, sacked.

Denver: Demand fair; supply ample; $75, up $2.50.

Seattle: Demand good; trend steady; supply ample; $1.65 a unit protein, ex-processing plant, sacked, unchanged.

Memphis: Demand fair; trend firm; supply adequate; 50% protein $85, without billing, up $8; 50% protein $88, with rail transit, up $9.

MEXICAN PHOSPHATE

Brownsville, Texas: Mexican natural ground rock; 13% phosphorus $30 sacked, bulk $2 less.

MILLFEED

Minneapolis: Demand good; supplies tight; sacked bran up $1 to $45; sacked middlings steady at $45; sacked red dog steady at $46.

Cincinnati: Demand fair; trend steady to higher; supply adequate; bran $50, middlings $50, both up $1.

Los Angeles: Standard millrun $48, better demand, firmer trend, light offerings, up 50¢; red bran $55.50@56.50, slow demand, firmer trend, ample supplies, up $1@1.50.

St. Louis: Demand fair; trend easier; supply ample; sacked bran $47.50, sacked shorts $47.50, unchanged; bulk bran $43, bulk middlings $44, down $1.

Chicago: Demand less aggressive; supplies fair; trend off 50¢@$2; standard bran $43; standard midds. $44@44.50; red dog $46.50.

Boston: Demand spotty; trend steadier; supply adequate; bran $53.60, off $1; middlings $54.60, unchanged.

Kansas City: Demand good; trend steady to weak; supply ample; sacked bran $42@42.50, down 50¢; sacked shorts $42@42.50, down 50¢; bulk bran $37@37.50, down $2; bulk shorts $38@38.50, down $2.50; bulk middlings $38@38.50, down $2.

Ft. Worth: Demand good; trend firm; offerings tight for immediate; bran, bulk $47.50, burlaps $51; grey shorts, bulk $50, burlaps $51.50; middlings, bulk $49.50, delivered Texas common points; bran and middlings unchanged; shorts up 50¢.

Minneapolis: Demand good; supplies adequate; prices unchanged; $33 for blackstrap, tank truck, delivered Twin Cities; $32 for blend.

Kansas City: Demand good; trend steady to stronger; supply ample; 12@12¼¢ gal., New Orleans, unchanged.

Los Angeles: Demand good; trend steady; supply ample; $23.50, f.o.b. tank cars; $23.75, f.o.b. tank trucks; both unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; 12¼@12½¢ gal., New Orleans, up ¼¢.

St. Louis: Demand slow; trend firmer; supply ample; blackstrap 12¼¢ gal., tank car, New Orleans.

Boston: Demand seasonal; trend steady; supply plentiful; tank cars 16½¢ gal., unchanged.

Ft. Worth: Demand good; trend steady; supply sufficient; blackstrap 13¼¢ gal., f.o.b. Houston, truck; $29.36, delivered Ft. Worth, seller's market price on date of shipment, unchanged.

Portland: Demand improving; trend firm; supply adequate; $40.50@41, sacked.

Denver: Demand moderately; supply ample; shorts $45.75, bran $45.75, millrun $45.75, all down 50¢.

Seattle: Demand good; trend firm; supply fair; $41, delivered common transit points, carlots, up $1.

Buffalo: Demand fair; trend lower; supply good; bran $46, off $1.50; middlings $46, off 50¢; red dog $49.50, unchanged; all prices f.o.b. Buffalo.

Memphis: Demand fair; trend steady; supply ample; wheat bran $46, gray shorts $47, standard midds. $47; all down 50¢.

MOLASSES

Seattle: Demand and supply good; trend easy; $23.75, f.o.b. Seattle, tank truck lots, unchanged.

Denver: Demand fair; supply ample; $31.70, tank car, unchanged.

Buffalo: Demand fair to good; trend steady; supply adequate; 16½¢ gal., f.o.b. Albany, unchanged.

Memphis: Demand fair; trend steady; supply ample; blackstrap 12¼¢ gal., tank car, f.o.b. New Orleans, unchanged; $31.75 ton, delivered Memphis, truck, up $4.58.

OAT PRODUCTS

Minneapolis: Demand fair; supplies adequate; sacked feeding rolled steady at $63; sacked feeding oatmeal up $1 to $69; sacked crimped steady at $65; sacked pulverized up $2 to $48.50; sacked oat feed steady at $26.

Cincinnati: Demand poor; trend steady; supply adequate; pulverized white oats $45 @47, unchanged.

St. Louis: Demand good; trend firm; supply limited; white pulverized $43, reground oat feed $22, both unchanged.

Boston: Demand light; trend easier; supply ample; white pulverized $53.10, sacked, off $1.10; reground oat feed $32, sacked, off $1.50.

Chicago: Demand good; supply fair; trend steady to $1 higher; reground $20@21; No. 1 fine ground feeding oatmeal $73; feeding rolled oats $76@79.

Kansas City: Demand fair; trend steady; supply adequate; oat mill by-product $24@25, sacked, unchanged; feeding rolled oats $74@75, sacked, unchanged.

Ft. Worth: Demand fair; trend firm; very light offerings; 10% protein oat millfeed $44.30, sacked, unchanged; reground $31.80 December, $29.90 January, sacked, unchanged.

Seattle: Demand and supply fair; trend steady; 38 lb. or better $50 delivered truck lots, unchanged.

Buffalo: Demand fair; trend higher; supply fair to poor; $34.60, sacked, Boston, up $1.

PEANUT OIL MEAL

Los Angeles: Nothing available for quotation.

POULTRY BY-PRODUCTS

Los Angeles: Demand slow; trend steady; supply ample; $1.50 a unit of protein, sacked, unchanged.

Boston: Demand and trend steady; supply steady; $85, unchanged.

Ft. Worth: Demand strong; supply scarce; $82.50@85, sacked, f.o.b. Texas plants, unchanged.

Memphis: Demand fair; trend steady at the advance; supply inadequate; 55% meal $90, sacked, nominal, up $4.

RICE BY-PRODUCTS

Los Angeles: Demand slow; trend steady; supply limited; California production, high fat content, bran $53, sacked, unchanged.

Ft. Worth: Demand good; trend steady; extremely light offerings standard rice bran, sufficient on solvent; standard rice bran $38, sacked, f.o.b. Houston, up $1; solvent rice bran $31.50 bulk, $35.50 sacked, f.o.b. south Texas rice mills, unchanged.

Buffalo: Demand and supply fair; trend steady; $56, sacked, f.o.b. Buffalo, unchanged.

SCREENINGS

Minneapolis: Demand fair; supply tight on Canadian; unground Canadian steady at $21; domestic lights up $4@7, $10@14; domestic mediums steady to $2 higher, $14 @20; domestic heavies steady at $20@28; 15% flax screenings off $3 to $37.

Los Angeles: Demand slow; trend steady; supply adequate; ground barley $35, sacked, unchanged.

Chicago: Demand good; trend $2@3 higher; supply fair; ground grain $33.50, Canadian $26.50.

Cincinnati: Demand good; trend steady; supply fair; unground grain screenings $23 @25, up $1.

Buffalo: Demand and supply fair; trend steady to higher; ground $40.25, sacked, New York, up 75¢; bulk unground $30.75, New York, up $1.25.

SOFT PHOSPHATE

(Sacked, delivered)

Atlanta: $20.25.
Buffalo: $25.50.
Chicago: $24.96.
Cincinnati: $23.64.
Des Moines: $25.42.
Kansas City: $26.07.
Memphis: $22.28.
Minneapolis: $26.12.
Philadelphia: $24.51.
St. Louis: $24.33.

SOYBEAN OIL MEAL

Minneapolis: Demand slow; supplies adequate; 44% off $1 to $54.50; 50% off $1.50 to $60; 41% expeller off $1.50 to $60.

Los Angeles: Demand slow; trend steady to firm; supply ample; $82.10, unchanged to 50¢ higher.

Chicago: Demand fair; supplies moderate; trend irregular and $1 lower to $1.50 higher; 44% restricted billing $60; 44% E.T.L. $57.50@58; 50% unrestricted billing $65.50; 50% E.T.L. $63.60.

Kansas City: Demand fair; trend stronger; supply adequate; 44% solvent $58@58.50, unchanged.

Cincinnati: Demand good; trend higher; supply adequate; $63, Decatur, up $4.

St. Louis: Demand good; trend easier; supply ample; 44% $60.50, up 50¢.

Boston: Demand and supply good; trend steadier; 44% $57.50, 50% $63.50, both up 50¢, f.o.b. Decatur.

Ft. Worth: Demand fair; trend steady; supply sufficient; 44% $63.70@70, December-January, unchanged to 70¢ up; 50% $74.70 @76, December-January, unchanged to 70¢ higher.

Seattle: Demand fair; trend easy; supply ample; $53, delivered, carlots, up $2.

Denver: Demand good; supply ample; $70.50, up $1.

Buffalo: Demand fair; trend steady; supply adequate; $67.50, Decatur, unchanged.

Portland: Demand active; trend strong; supply adequate; 44% $81.85, 50% $87.85.

Memphis: Demand fair; trend weak; supply ample; prime 44% solvent $61, f.o.b. Memphis, unchanged.

TANKAGE

St. Paul: Demand fair; supplies ample; prices $2 higher, $91@96.

Chicago: Demand improved; trend higher, up $2.50; supply moderate; 60% protein $92.50, sacked.

Cincinnati: Demand excellent; trend strong; supply good; 60% digester $92.50, Cincinnati, up $9.

Kansas City: Demand good; trend strong; supply tight; 60% digester $90@92.50, unchanged to $2.50 higher.

Ft. Worth: Demand good; trend firm; supply scarce; 60% digester $90, sacked, f.o.b. Ft. Worth, unchanged.

UREA FEED COMPOUND

Woodstock, Tenn.: Minimum 42% nitrogen, 262% protein equivalent; $105 bagged, $99 bulk, delivered in all states east of and including New Mexico, Colorado, Wyoming and Montana.

LaPlatte, Neb., and South Point, Ohio: Minimum 42% nitrogen, 262% protein equivalent, $96, f.o.b. bagged; $90 bulk, cars or trucks; freight equalized with nearest producing point.

Pryor, Okla.: Minimum 42% nitrogen, 262% protein equivalent, $95 bagged, $91 bulk, f.o.b. Pryor, freight equalized with nearest producing point; $100 bagged, $96 bulk, delivered in cars or trucks to New Mexico, Colorado, Wyoming and all states to the East.

VEGETABLE & ANIMAL FAT (HYDROLYZED)

Los Angeles: Demand fair; trend steady; supply adequate; 5⅛¢ lb., unchanged.

Ft. Worth: Demand good; trend steady; supply limited; 4¾¢ lb., f.o.b. north central Texas, unchanged.

COMPLETE ELEVATOR, MILL

ROLFE, IOWA—Construction has been completed on a new 35,000 bu. grain elevator and feed mill for the Climax Grain & Feed Co., Rolfe, Iowa. Contractor was United Engineering Co., Ft. Dodge, Iowa. Mr. and Mrs. H. I. Wickre are the owners.

CHICAGO

(Continued from page 93)

this proportion is down to less than 10%.

L. T. Shoene, manager of a PCA office at Hastings, Minn., said PCA and other lending institutions which have loaned money in the past to farmers who grew turkeys are now backing away from the practice.

"Crying Shame"

To Howard Kauffman of Waterman, Ill., who grew about 100,000 market turkeys, dressed most of these birds, produced some 200,000 hatching eggs and hatched about 150,000 poults in 1961, it would be "a crying shame to cast a growing, vibrant business aside and take on government red tape, inequality and possibly dishonesty."

Mr. Kauffman, a director of the National Turkey Federation, testified for himself and for the Illinois Turkey Growers Assn.

"After anyone has read the marketing orders," he added, "I think he becomes thoroughly confused. He immediately realizes that government red tape will soon take over his industry. Inequalities, unfairness between sections (of the nation), areas and different plants become apparent. The rewards for cheating, lying and dishonest practices are made attractive."

During his 28 years in the turkey business, Mr. Kauffman testified, "Every one of them (years) has been a profitable one for me until 1961. I believe this is generally true in our turkey industry. . . .

"I cannot help but feel that if the turkey industry exchanges its freedom for the red tape of government control that we are very much like Esau who, in Genesis, the first book of the Bible, sold his birthright to his brother, Jacob, for a bowl of porridge under the impetus of immediate and gnawing hunger."

Word from Missouri

Testimony by William Beckett, general counsel for the Missouri Farmers Assn., indicated that the organization basically agrees with the grower allotment approach to production control first suggested in the so-called "Ziegenhagen Amendment" at the Des Moines hearing.

Mr. Beckett, also a vice president of Missouri Farmers Assn., submitted proposed changes and additions suggested by the cooperative, but said the organization currently favored the proposed turkey and hatching egg orders as "an immediate logical solution." He said the orders, as presently proposed, are the "only immediate prospect for helping the industry's situation," but added, "This doesn't mean we can't look for something else in a year or two."

Under an amendment proposed by the MFA, a handler who required, as a condition of receiving poults, a poult producer to purchase feed, medicine or other supplies from the handler would be liable to penalty under unfair trade practice provisions.

Any producer allotments established under the MFA proposal would not be less than 100% of the first 15,000 lb. of each producer's allocation base. In other words, if a producer grew no more than 15,000 lb. of turkey, his allotment would be no less than that.

Expert Witness

Dr. Don Paarlberg, a former assistant secretary of agriculture for marketing and foreign agriculture and now on the staff of Purdue University, appeared as an "expert" witness. He said his concern regarding the proposed marketing orders "comes from my belief that these orders would have adverse economic consequences for farmers."

The proposed hatching egg order, he said, would increase prices which would have to be paid for poults by growers.

"The proposed order is unique in this major respect: While other marketing orders of which I have knowledge have the effect of increasing prices paid by processors, this one would increase prices paid by farmers," he said.

"It would be necessary to ration out the limited supply of poults to turkey growers who, with the prospect of a higher price for turkeys, would express a strong demand for poults."

He suggested that one way to ration the supply of poults would be with quotas for turkey growers. But he added that, under existing law, quotas for producers are of doubtful legality; many turkey growers are opposed to quotas, and the proposed order does not provide quotas for growers.

Packers' Viewpoint

Representatives of three major meat packing concerns, Swift, Wilson and Armour, testified as turkey marketing order opponents. All three protested the difficulties which would be encountered, under certain provisions of proposed orders, in sorting set-aside birds by grower lots. They said identifying birds for each producer from which birds were received would be a major problem.

They also generally agreed with a statement made earlier during the Chicago hearing by Dr. Gordon W. Sprague of Land O'Lakes Creameries, Inc., Minneapolis (Feedstuffs, Dec. 9, page 1). They said their companies would not want branded turkeys included in any set-aside pool.

Testimony and questioning related to turkey processing suggested the possibility of buying turkeys from other processors to fulfill set-aside obligations.

Grower-Processors

Representative of the testimony heard from a number of growers who process and retail their birds themselves were these comments by Lawrence Dean of Michigan: "We don't need marketing orders. . . . We can stay in the black without them. . . . We're providing the customer with the kind of bird she wants and she's willing to pay a premium price for it. . . . Set-aside (provisions of the proposed marketing orders) could eliminate us from business."

Mr. Dean said retailing turkeys has been more profitable than growing the birds. And he said that, while he didn't know how many growers sold their own birds at retail, he believes this type of marketing could be increased.

Research Exemptions

Dr. J. Holmes Martin, head of the poultry science department of Purdue University, testified, in behalf of the Poultry Breeders of America, Inc., that "qualified" breeders should be exempt from set-aside provisions of marketing orders in respect to research needs. He said it would be unfortunate if restrictions hindered research projects.

Dr. E. L. Johnson, head of the University of Minnesota's poultry department, also talked about exemptions for research, but in behalf of university experimental turkey projects. His testimony requested that any marketing order not place non-profit experimental work under the restrictions applied to industry.

Richard Larkin, U.S. Department of Agriculture representative, asked Dr. Johnson if the type of research done by colleges is also done by commercial organizations and wondered if the Minnesota department head was suggesting that commercial research be excluded, too. Dr. Johnson said he was in no position to answer Mr. Larkin's questions.

The Independent Turkey Growers Assn., represented by Wallace Wright, an Elma, Iowa, turkeyman, strongly opposed marketing orders.

"Don't get us wrong," he said. "We don't want to suggest changes in the proposed marketing orders. . . . We don't want any marketing orders.

"The best way to help an industry is to leave considerable risk in it. This is free enterprise."

The Independent Turkey Growers Assn. was formed in Iowa when the Iowa Turkey Federation's board of directors voted in November to support the proposed marketing orders.

The problem of turkey growers having to wait for payment for birds allocated to a set-aside pool was pointed out by Elmer Embury, Byron, Mich., grower.

"The small grower would take his birds to a handler and pay the cost of handling but wait for the money from such birds and then receive only such amount as the committee has seen fit to receive from the sale of such birds," he said. "In this case the producer has no say in the disposition of his own product."

BROILERS

(Continued from page 1)

tions slowed the transporting of birds to market this week as dirt roads to houses were impassable. However, this only made the shortage situation more acute because it had developed prior to the bad break in the elements.

Profits Possible

Higher prices mean better than a "break-even" situation for growers. At latest on-the-farm prices, growers can show a little profit—something most haven't seen since last spring.

Gains in price strength continued through the week. Dec. 15 it was reported that broiler prices at the farm in Georgia had climbed to 15-15½¢—about half a cent higher than the day before and more than a penny above the level of two days earlier.

At-plant prices Dec. 15 were quoted mostly at 16-16¼¢, but in some instances the at-plant price was 16½¢.

North Carolina markets were paying 15¢, with the market showing further strength.

For the week ended Dec. 6, Georgia markets handled 6,165,000 broilers—4% more than for the same period last year. Egg placements totaled 8,775,000—5% more than for the like period a year ago.

Market Outlook

The strengthening of the market has brought an entirely different attitude on the part of growers, and the industry as a whole.

Some sources point out that the market is following the same pattern it did in 1955 when prices plunged. It was pointed out that prices started climbing in December and continued upward.

Checking for reaction as to how permanent the trade thinks the present incline will continue, brought out the feeling that prices will continue at or about the same level through January and possibly February.

However, sources were conservative in making predictions and making an effort not to be too enthused over the way the market has turned the last couple of weeks.

It was pointed out, however, that processing plants are expecting shortages to continue not only through the holidays but through January. It was stated that the latter part of February will bring along new placements which could affect the market.

At the North Carolina Animal Nutrition Conference at Raleigh this past week, suppliers said there is a better feeling all around that area.

Meanwhile there appears to be a slow-down in marketing order activity in the Southeast as time nears for Congress to return to Washington and possibly act upon legislation now being prepared for introduction.

The poultry commodity committee is due to meet again in Washington on Jan. 3 and 4. The purpose will be to review a tentative marketing order being prepared by a committee of eight, which was slated to work on the first draft over the holidays.

Mergers, Acquisitions

Meanwhile, even as the market shows a stiffening process, rumors of some changes in broiler production in Georgia continue to circulate. At least one major merger was reported in trade circles during the week.

There were reports of additional expected acquisitions by Ralston Purina Co. of poultry operations in Georgia, with official announcements expected to be made before long.

Optimism Noted

Other developments included these:

At a meeting of the Northwest Georgia Feed Dealers Assn. in Dalton last week, there was a feeling of optimism that hasn't existed for several months.

One feed dealer attending the meeting expressed his opinion that the higher prices now in effect would extend at least through April, although most other sources were not so optimistic. The more conservative are predicting present prices, or perhaps a little higher, through February.

A processor, queried about his running schedule for the remainder of this year, said it all depends on how many birds he is able to buy.

He also voiced the opinion that the consumer demand is running higher than normally expected for this time of the year. With the curtailed production, this has caught supply lines short.

Marketing Orders

The Georgia Turkey Assn. met at Rock Eagle last week for the purpose of discussing the marketing orders and while no official action was taken it was the consensus of those attending that turkeymen in Georgia would be in favor of marketing orders if controls were placed at the producer-farm level rather than at the hatchery levels.

There was very little activity in marketing orders for broilers in the South this week as a period of wait-and-see has developed.

Chick placements are still on the conservative side, the latest figures reveal. Egg settings are showing a decline, also, although only slight.

$1,000 Awarded to Meat Judging Team

MADISON, WIS.—A team representing Oklahoma State University has won the $1,000 first prize offered by Chas. Pfizer & Co., Inc., in the Intercollegiate Meat Judging Contest.

The three-man Oklahoma State team, coached by Prof. L. M. Walters, topped 23 other competing college and university teams ringing up 2,736 points out of a possible score of 3,000. The contest, now in its 32nd year, is sponsored by the National Live Stock and Meat Board in cooperation with the International Livestock Exposition.

Pfizer also presented a $500 award to the second place winner, a team representing the University of Tennessee, coached by J. W. Cole, and a $250 prize to the third place team from the University of Illinois, coached by Robert Kauffman.

These awards were presented by Dr. Wid Crawford, animal nutritionist at the Pfizer Agricultural Research Center, Terre Haute, Ind. The prize money will be used to finance meat research at the winning schools, the Pfizer announcement said.

Leading the Oklahoma State University team to its top position was Hugh Halsey, Piney Creek, N.C., with 934 of a possible 1,000 points. He surpassed the scores of all individual contestants, it was pointed out.

Other members of the winning Oklahoma State team were Rodney Orrell, Carnegie, Okla., and Jack Tucker, Mullen, Neb.

This is the fifth year that Pfizer has offered cash prizes in this contest designed to give youths an opportunity to test their skills in judging cuts and carcasses of beef, pork and lamb for quality, texture, tenderness and palatability. Last year's $1,000 prize went to Iowa State University.

Chicks Placed in Principal Broiler Areas

(000's omitted)

Week ending	Maine	Conn.	Penn.	Ind.	Ill.	Mo.	Del.	Md.
October 7	1,137	248	644	494	56	573	1,355	1,667
October 14	1,058	219	600	449	66	607	1,259	1,853
October 21	953	236	432	456	24	593	1,184	1,888
October 28	1,158	257	539	455	38	571	1,514	1,907
November 4	1,165	251	701	517	45	679	1,529	2,056
November 11	1,105	244	763	569	54	684	1,695	1,911
November 18	1,148	296	741	622	53	694	1,519	2,022
November 25	1,089	238	595	635	58	662	1,482	2,101
December 2	1,146	222	795	709	35	671	1,615	2,057
December 9	1,154	221	707	696	50	644	1,459	2,367

Week ending	Va.	W. Va.	N.C.	S.C.	Ga.	Fla.	Ala.	Miss.
October 7	739	245	2,979	357	5,325	151	3,388	2,001
October 14	712	273	2,889	345	5,455	157	3,372	1,944
October 21	711	245	2,738	293	5,274	174	3,204	1,906
October 28	666	176	2,761	373	5,433	198	3,278	2,138
November 4	716	263	2,816	316	5,512	201	3,474	2,123
November 11	776	353	2,877	349	5,551	205	3,476	2,153
November 18	724	374	3,014	315	5,629	224	3,397	2,206
November 25	791	380	3,048	342	5,890	240	3,529	2,166
December 2	856	341	3,193	364	6,020	260	3,493	2,285
December 9	879	372	3,289	343	6,165	253	3,703	2,263

Week ending	Ark.	La.	Texas	Wash.	Oregon	Calif.	Total 22 areas 1961	Total 22 areas 1960
October 7	3,579	394	1,666	296	182	1,082	28,558	28,442
October 14	3,468	407	1,632	291	141	1,049	28,246	28,355
October 21	3,441	337	1,700	261	92	943	27,085	28,165
October 28	3,312	350	1,726	225	109	948	28,132	28,639
November 4	3,107	397	1,759	235	168	945	28,986	29,157
November 11	3,327	371	1,741	236	191	989	29,620	29,970
November 18	3,462	369	1,788	294	171	1,083	30,145	30,282
November 25	3,247	357	1,811	254	147	1,032	30,094	29,932
December 2	3,739	399	1,956	206	192	1,085	31,639	30,818
December 9	3,803	395	1,905	223	135	1,136	32,162	30,971

TOP OF THE HOPPER

(Continued from page 2)

Freeman, secretary of agriculture, told the group, according to the Times, "I have been disturbed that people have the idea that marketing orders are government controls. We are not here to bamboozle you, but to serve you. This is no government controls program."

The Secretary then advised committeemen to "get on the phone and straighten out the editor if he writes an editorial calling this program a governmental control program."

So far, no phone calls in the Hopper corner, which consistently and in the good company of numerous learned and honest economists, has described marketing orders as government controls. We think we will continue to do so until we are assigned a typewriter key "set-aside" which does not include these letters.

SAID ONE Chicago turkey marketing order hearing spectator to another during a lunch break: "What do you want to bet that before another year is out we'll be going through this sort of thing again for eggs?"

There was no bet.

WHILE THE BIGGEST cattle feedlots mix their own rations, a number of feed manufacturers have moved into cattle feeding. Recently reported is a midwest feed manufacturer's building of a mill for a 10,000-head feedlot.

THERE IS INCREASING INTEREST in the effects of diet on animal products and the possibilities of modifying the animal products through feeding. One reason for this, of course, is the public consciousness of consumption of total fat and various types of fat, depending on types of fatty acids in the fat. It has been shown that the composition of chicken fat can be altered, and one scientist said that if he were in the broiler business, he would be thinking about producing chickens with the fat composition altered to appeal to some consumers.

Smith-Douglass CDP Now in 50-Lb. Bags

NORFOLK, VA. — Smith-Douglass Co., Inc., here, has announced that its CDP defluorinated feed phosphorus supplement became available in 50 lb. bags Dec. 15 at three shipping points.

Those points are: Muscatine, Iowa; Plant City, Fla., and Port Arthur, Texas. Henry Highton, feed phosphorus sales manager, said CDP is available in both 50 and 100 lb. new multiwall papers as well as in bulk from all three shipping points.

MAKE LIVESTOCK FEED

DYERSVILLE, IOWA—Harry and Bob Leigh have begun the manufacture here of Ken-Mar livestock feed. The line includes hog, dairy cattle and feeder cattle feeds. Poultry feeds will be added later.

EFFECT

(Continued from page 1)

if marketing orders currently proposed were to become effective.

Also discussed here in informal gatherings were the restricting effects the proposed marketing orders would have on foundation breeders and hatching egg producers.

(A summary of testimony heard at the Oklahoma City hearing appeared in the Dec. 9 issue of Feedstuffs, starting on page 1.)

Of Special Significance

On-the-farm processing and direct retailing have special significance in Oklahoma and in other states. In fact, Sewell Skelton, Oklahoma State University extension poultry marketing specialist, believes that these small dressing operations have kept some Oklahoma turkey producers in business.

The principal provision of the marketing order proposed for turkeys which some producers feel would bring an end to farm processing is the one which would require federal inspection for grade or quality. According to interpretations, this section further provides that the costs of such services would be borne by the person processing the turkeys.

Producers who process only their own turkeys are currently exempt from inspection requirements. The proposed marketing orders, according to opinions expressed here, would nullify this provision.

It was said that the costs of inspecting production of small farm processing plants would be prohibitive. Also, it was observed that a sufficient number of inspectors would be unavailable, since they already are in short supply for large plants under federal inspection.

"Dim Hopes"

In an interview, Roy Ferguson, River Rest Turkey Sales, Inc., Shawnee, Okla., a marketing order opponent, said he believes "any hopes for continued highly selective breeding improvement and research work are very dim under the proposed marketing orders." This view was generally shared in testimony by several producers, processors and hatcherymen.

"The turkey industry can continue to progress far more sensibly under free enterprise than under a program so designed that no individual nor group, regardless of wisdom, can hope to prevent grossly unfair situations," Mr. Ferguson said.

Export Curtailment

He noted that the effects of the proposed marketing orders would curtail export shipments and this would present another problem for the breeder to face.

"At the present time, 30-40% of our total volume is exported to Canada and South America," he said. "By no strength of the imagination can foreign turkey production ever hurt the U.S. market. The Agricultural Act of 1937, as amended, specifically provides for embargoes anytime imports threaten to interfere with the purpose of a market order.

"Both Canada and Latin America are almost entirely dependent upon U.S. breeders for foundation stock. How can shutting off their supply be construed as a sound way to improve badly needed international good will?"

Mr. Ferguson also noted that certain sections of the proposed marketing orders provide for each year's nationwide commercial production to be governed according to the percentage allotments provided to breeders of the various sizes or types of turkeys permitted. "While the progeny from commercial breeders affect the current year's crop, the progeny from foundation breeders affect only the next year's crop," he said. "Since a foundation breeder's research program looks into the future, the progress in research would be a matter of the secretary of agriculture's decision rather than each breeder's initiative and experience."

Domestic vs. Foreign

Harold Mobley of Mt. Vernon, Mo., another commercial egg producer with substantial interest in export markets, declared in a personal interview, "The costs and risks of developing a foreign market are substantially greater than in the U.S. The proposed marketing orders make no distinction between foreign and domestic egg handlers. This would definitely interfere with international trade between the U.S. and foreign markets.

"How can we be expected to be agreeable to a proposal to destroy set-aside eggs that are not even distined for the American market? Since the secretary of agriculture can change egg allocation bases at any time, what outlook is there, other than bankruptcy, for the small, independent egg producer?"

WILL CATTLE GET COFFEE NERVES?

RALEIGH, N.C.—A new source of feed for ruminants is the soluble coffee industry. Animals like the residue from making instant coffee, reported Dr. Morley R. Kare, North Carolina State College, in addressing the state's annual nutrition conference.

TRENDS

(Continued from page 6)

Many gave cash discounts of 1 to 3% or $1 to $4 per ton to encourage payment.

MIXING—Nearly 70% of all establishments surveyed (including "retailers" and others) mixed feed. The percentage varied from 21 in Massachusetts to 89 in Indiana. In most states, most of the mixing establishments had mixing volumes under 10,000 tons; California had the least small volume mixers. Among the mixing establishments, those that "mix only," presumably the wholesale type of feed manufacturer, were in the minority, as would be expected.

Manufacturing Practices—"Ground-up" mixing, use of premixes or use of supplements tended to vary with volume, as would be expected. Many medium and small operations used both supplements and premixes. Custom mixing was most prevalent among smaller mixers and in grain areas. Survey figures also showed the marked increase in grain banking in grain states particularly.

Sales Practices—The report noted the increase in bulk feed in all areas, especially the West, but pointed out that bagged feeds still represent most of the sales in the East particularly. Complete feeds, as expected, represented larger percentages of sales in grain deficit areas. As tonnage increased, percentage retailed from the plant tended to decrease, presumably reflecting the shift from retail to wholesale type operations. Direct sales from plant to feeder were more important in California and Georgia than in other states. It was noted that farm specialization and bulk feed have encouraged more direct selling, with some manufacturers dropping dealer organizations. The tendency in some states to "demand orientation," with plants closer to feeders was pointed out.

RECENT TRENDS — The survey also obtained opinions from feed men on various trends.

On-Farm Mixing — Respondents were asked to estimate percentages of large feeders in their areas who had installed grinding and mixing equipment. Percentages ranged from 4 or 5 up to 18 among the different states, with lowest percentages in the grain areas, where stationary and mobile custom milling may have counteracted the farm mixing trend.

Supplements and Complete Feeds—The industry in Pennsylvania, Georgia, Indiana, Iowa and Colorado indicated a shift from complete feeds toward concentrates or supplements during the past five years. The shift also was noted more by larger plants.

Custom-Mixed and Formula Feeds — Custom feed volume appears to have grown relative to formula feed volume in Pennsylvania, Georgia, Indiana, Iowa and Colorado.

Direct Feed Sales—There was remarkable uniformity in the view that direct sales increased, but at a slow pace, during the past five years, with the increase more rapid in the West.

Bulk Sales—An average of 78% of the respondents indicated a trend toward bulk in their areas, with the trend most rapid in the West and in Georgia.

MARKETS

(Continued from page 2)

Aug. 4 when the ratio was 3.2.

Cover crops which are being grazed haven't been growing much lately due to lack of rain. But the area has had a good ground soaker now.

Pacific Northwest

Oregon, Washington and Idaho formula feed sales were considered to be good as a reflection of lower temperatures which increased usage throughout the region.

There continued to be a good movement of laying hen mashes, but the demand for turkey and frying chicken feeds was seasonally limited.

Hen and tom turkey prices strengthened at Portland, and there were strong indications that prices for fresh dressed birds will be 2 to 3¢ higher than during the pre-Thanksgiving period. Producer paying prices for live fryers throughout Oregon's Willamette Valley held unchanged at 14 to 19¢ lb., f.o.b. ranch.

Higher outside market values and dependable pre-holiday demand advanced producer-paying prices for eggs by 2¢ a dozen this week.

Mountain States

Feed business volume is steady to slow in this area and is somewhat under the level of a year ago. Cattle feeding is good but has not yet lived up to expectations.

Feed men here say that the Christmas holiday season is normally dull volume-wise.

Broiler and layer feeds remain steady.

Southern California

Feed sales and production decreased substantially for most dealers and feed mills because the large volume of Southern California turkeys has been marketed or moved into cold storage. In another two weeks all of this season's birds will be gone. The turkey market ranges from 17½ to 18¢ for toms while hens are selling for 20½ to 21¢ lb., f.o.b. ranch, a touch weaker since Thanksgiving.

Broiler men are beginning to smile again as prices jumped to 14 to 15¢ lb., f.o.b. ranch. This price indicates a level very close to break even costs for the efficient operators. Several growers are speeding replacements now that price increases have been noted.

POULTRY

(Continued from page 1)

American Feed Manufacturers Assn., National Turkey Federation and Poultry & Egg National Board.

The complete committee report is as follows:

TURKEYS—In the present situation of uncertainty, a cutback of about 5-7% in the January-June poult hatch seems likely. Supplies from this hatch should move to market during the 1962 September-December season at about 21¢ U.S. average farm prices. Consumer demand during this period will be strong. Extension of credit for production will be more selective, but sufficient credit will be available to finance a large turkey crop. Feed costs for the new crop will average about the same to slightly higher than in 1961.

Storage carry-over into January, 1962, will set a new record—about 100 million lb. larger than in January, 1961. Prices during the first quarter of 1962 are expected to remain near current levels. However, prices will improve somewhat during the second quarter and by June may equal or be slightly higher than the record low prices of a year earlier.

The effect of the proposed marketing orders in the year ahead is not known. It would appear that the mechanics of referendum and activation of the final order or orders could not be put into effect until March or April. Any curtailment in the poult hatch as a result of the orders probably would not be effective until the second quarter of 1962.

Unless it is soon made clear that 1962 production will not be included in any allotment calculations, there might be an incentive for a heavier than anticipated hatch during the early months of 1962.

BROILERS—U.S. farm prices of broilers are expected to average about 15.5¢ in the first quarter of 1962, about 1.5¢ below a year earlier. Marketings will be slightly greater than the same period of 1961.

April-June prices may average about 15¢—1¢ higher than April-June, 1961. Marketings are expected to be slightly smaller than in the second quarter of 1961 when supplies increased sharply to a level 20% above April-June, 1960.

In view of 1961 losses and expected small profits in the first half of 1962, there is some possibility that July-December, 1962, marketings will be reduced compared to a year earlier. If last half marketings were about 10% smaller than those of the same period of 1961, a 15¢ farm price level could probably be maintained. Certain factors may operate against such a reduction. Among these are (a) excess of production capacity in all sectors, and (b) some probable efforts to establish production bases in expectation that broiler supply controls may be established.

Broiler prices in major Southern supply areas usually average about 1¢ below the U.S. average on which this report is based.

EGGS—U.S. farm egg prices during the first quarter of 1962 will average 32-33¢ a dozen or 5-6¢ under year earlier levels. April-June prices are expected to average 28-29¢. This would be 3-4¢ under April-June, 1961, prices. Third quarter prices are likely to be about 32-33¢, 2-3¢ below the same period of 1961. Egg supplies in the first nine months of 1962 will be above year earlier levels.

The laying flock on Jan. 1, 1962, will be about 1% smaller than on Jan. 1, 1961. Layers will be younger and, at least during the first six months, more pullets will be added to the laying flock. The younger flock will result in a greater than usual year to year gain in rate of lay. The increase in the 1961 off-season hatch will result in about 15 million more new layers being added to the laying flock during the first half of 1962 than during the same period of 1961. Therefore, by the second quarter the size of the laying flock will move above year earlier levels.

Although prices will be lower in the first half of 1962 than in the corresponding months of 1961, they will be high enough to encourage many commercial producers. Therefore, the number of egg-type chicks hatched is expected to total about the same for the first half of 1962 as during the same period of 1961. Such a hatch, combined with the young age of the current laying flock, would mean moving into the 1962-63 laying year with a flock size above year earlier levels. Egg production would likely be high enough to cause egg prices during most of the laying year beginning Oct. 1, 1962, to be lower than during the current laying year which began Oct. 1, 1961.

The Poultry Survey Committee announced that its next meeting will be March 22-23, 1962. The group meets four times a year to forecast prices and production and consumption trends for poultry products.

Feed Situation Seen

TORONTO—The Meat Packers Council of Canada, in a recent bulletin, commented on the Canadian feed situation in relation to its hog survey.

"Survey correspondents in making their monthly report to the council, indicated that the feed situation was still the most important factor affecting hog production across Canada.

"Some areas in the Prairies are short of feed, while other areas are in the midst of a brisk movement of feed grain at high prices. In the East, particularly Quebec and the Maritimes, high feed costs are still causing much concern.

"November breedings across Canada were estimated at 2.5% below those of last year at this time. This decrease is due mainly to reduced breedings in western Canada, as a slight increase is believed to have occurred in eastern Canada during November."

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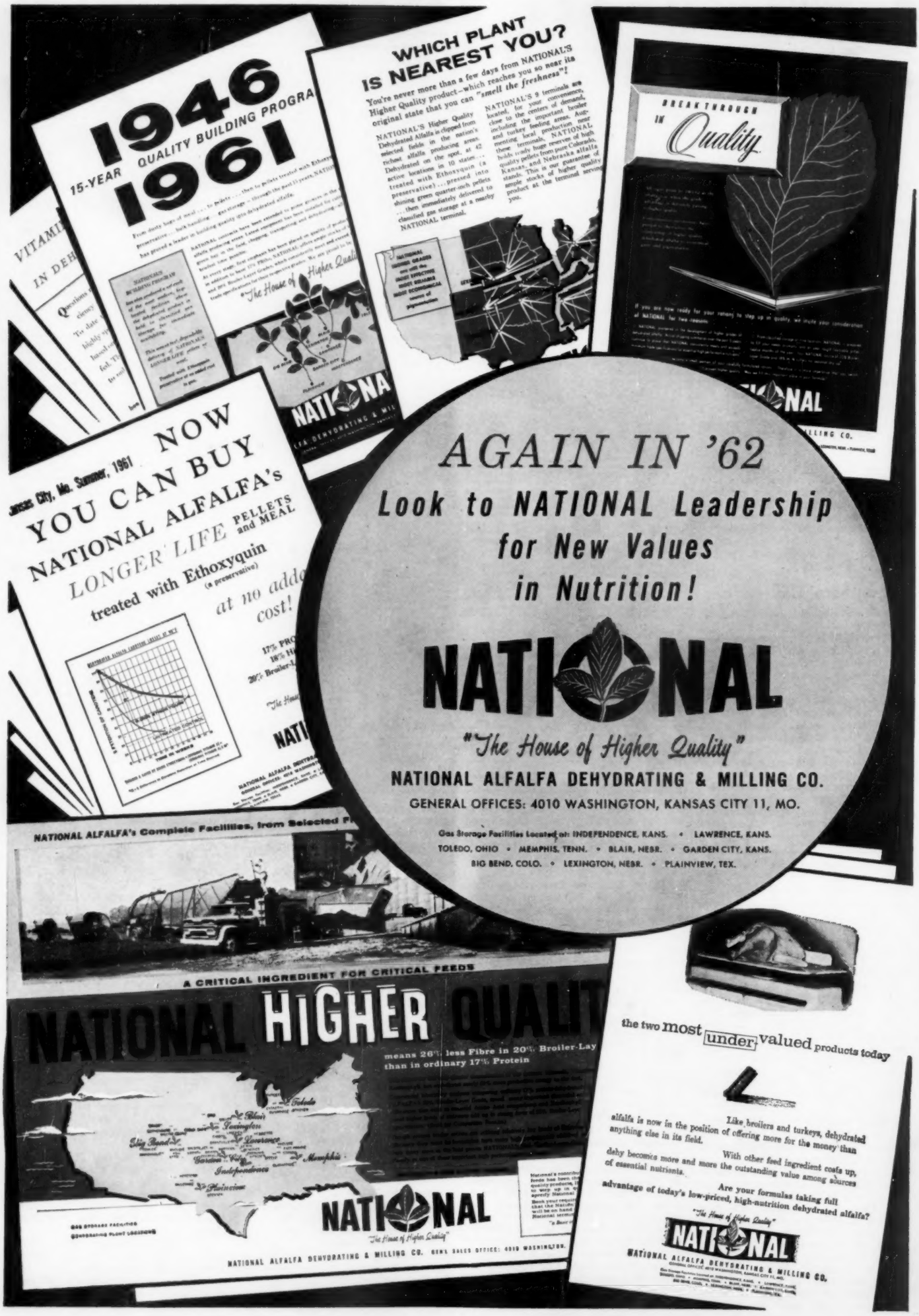
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